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Journal of the STANLEY MEDICAL COLLEGE

SURGERY NUMBER

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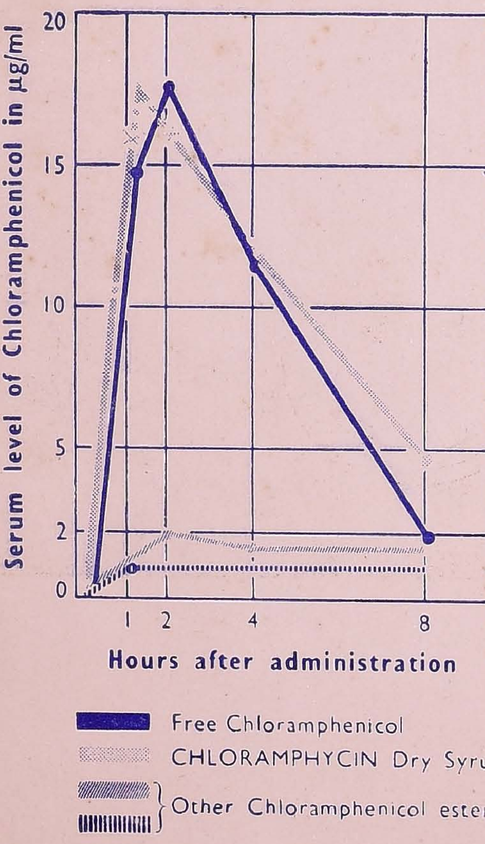

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Journal of the Stanley Medical College

Surgery Number

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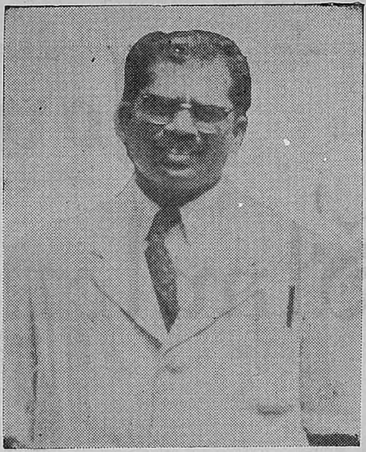

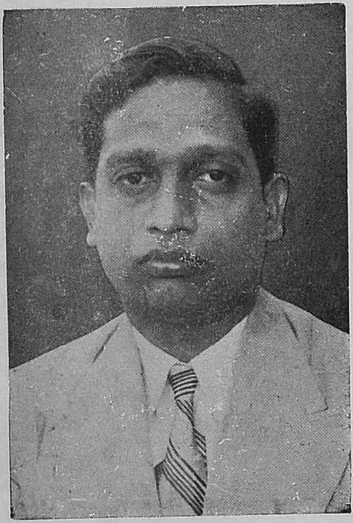

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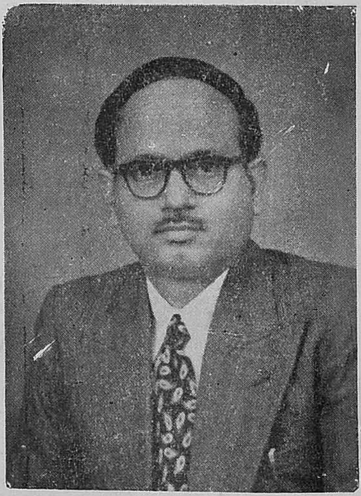

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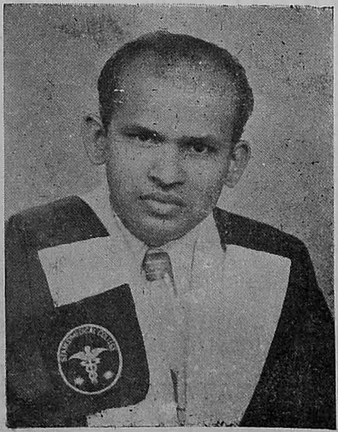

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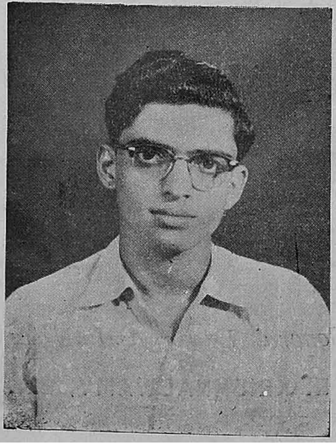

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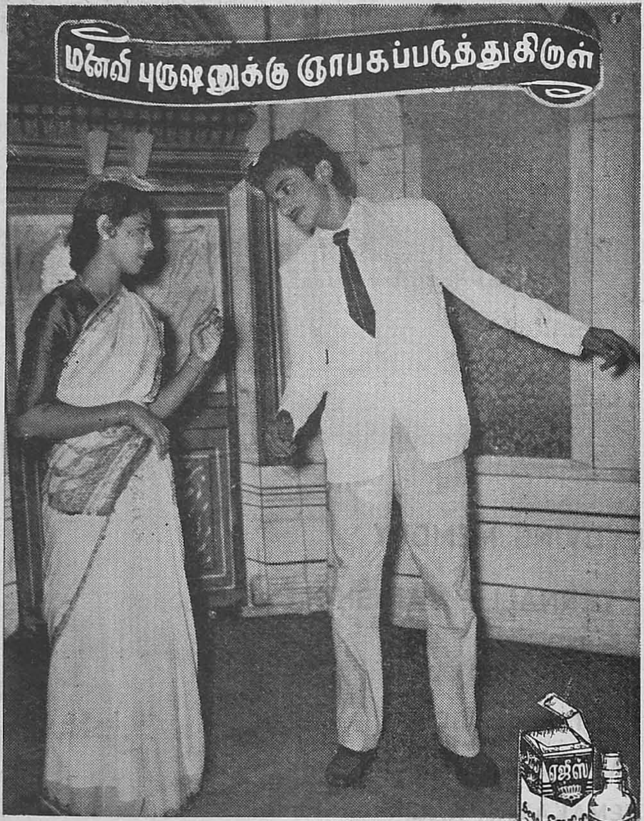

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THE FIRST SURGEON

Art by: R. Krishnamurthy

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THE FIRST SURGEON

And the Lord God Caused a deep sleep to fall upon Adam, and he slept : and He took one of his ribs and closed up the flesh instead there of ;

And the rib, which the Lord God had taken from man, made He a Woman and brought her unto the man.

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Editor's Echo

★

Undaunted by danger and unwearied by toil, we have been marching along the labyrinth throughout. We are living in an age which has witnessed the surgeons pass from the technical barbarity to the scientific intricacies of Electronics, pass from the mixture of tradition of "Barber Surgeons" of the 15th century to that of the Royal College of surgeons of the 20th.

Historical...

Whether we stand on an ancient mound of Mohanjadoro or a modern palace like Moscow Kremlin our thoughts will naturally go back to our forefathers and pioneers who owed the grandeur of their lives to the tremendous difficulties in this field.

Egypt was the cradle of Ancient surgery. Trephinings and circumcisions are cited, broken bones were set and tumours removed. Surgery in prehistoric era was practised by priests. The Rig Veda and Yajurveda (1500 B.C.) give ample evidences as to how mature the art of healing in Ancient India was. Even plastic surgery was practised by ancient Indians. The ancient Greeks acquired their surgical skill mainly during the Trojan war. But the paradoxical lack of anatomical knowledge was so much and to quote one incident, Garrison a strolling eye surgeon was thrown in to the Oder just because he failed to cure John of Bohemia of his blindness !

We owe to Hippocratus who was the real father of Modern medicine and surgery and he assertively pointed out that the origin of diseases lay not in supernatural powers but in physical causes.

Andrews Vasalius is the father of modern anatomy and his " De humanis Corpores " is an unparalled work of scientific art which only could expose the structure of the body. The record of greatmen particularly when it belongs to a remote age can never be mere record of undisputed fact and even when such facts are excessive, the biographer must penetrate behind mere events to the purpose and character they disclose and can do so only by constructive imagination and hence my difficulty in portraying the picture of those.

Celsus a man of encyclopoedic mind wrote an immense book on philosophy, military strategy, law and medicine and he was a famous surgeon. The twilight of ancient surgery dawned with the bright radiance of the developments in the adjuncts of surgery like histology, pathology, anæsthesia and antiseptics and these would be a mere record of facts and figures if I try to mention one after another and hence I confine myself only to this background and proceed further.

Now...

The operating room in a hospital gives a dramatic picture. The surgeons and nurses in their white gouns, masks, the patients upon the operating table, powerful lights focussed upon the patient, the gleaming knives and forceps and the calm and complacent surgeon proceeds to the table. The surgeon of the day can be calm on the operation day and he can perform his operation in his usual methodical care and meticulous skill because of the two great modern discoveries 1. Antiseptics .2 Anæsthesia.

No group in the world has a goal like the medical man's. Surgeons look forward to the day when the human race will be so healthy that it will require neither surgical nor medical man's assistance. Testifying to that, if we look at the medical world's laboratory, the experiments and the results in progress, we can have an idea as to how soon our hopes will be realised. Discoveries do not belong to the discoverers. They belong to the mankind anywhere and everywhere and my friends who go through the pages of this issue, I, hope will have their interest stirred, engaged and held by it so that they discover in themselves a vocational inclination towards surgery and its supporting sciences and services.

Is it too much on my part to expect that my hope will soon be realised ? I hope not.

General...

What shall I touch with regard to the general section ? I think it is not out of place if I touch upon the second five year plan which is the nation's major concern to bring about 25% rise in National income and to raise the standard of living in the country, to give scope for rapid industrialisation with regard to heavy industries and equitable economic distribution and an expansion in employment opportunities. The total developemental outlay of the Central and State Governments during the period of the second plan will be rupees 4800 crores. Out of that the health section gets a sum of rupees 274 crores. My main aim in drawing attention to this particular section is in terms of Savings as part of our practical patriotism. In the planning forum held in our college sometime ago, our Dean suggested to make widespread propaganda about National Savings, its ideals and advantages and thereby help the Government in carrying out their ambititious plan. Of course our savings and contributions may not be a sum total and substantial amount, but it will go a long way to help the government in terms of carrying out their policy. That is what he suggested and I hope my friends will give due consideration and do the positive.

Social...

We are marching on from the principles of Laissez-faire of the last century to the conception of the Welfare state of the present century. The all round welfare under the central Social Welfare Board is giving ample scope for furthering in the future. Welfare of women, rescue of women and girls in moral danger, child welfare, wide schemes with regard to the family planning, education and mobilisation of public opinion, welfare of the handicapped, juvenile delinquents and so on. Thus the momentum imparted to this movement is remarkable and we are on the road to our objects.

Political...

The political horizon around is dim. We are indeed unable to cope up with the lightning changes that are going on around us. Kashmir crisis, Agreement of Indus waters, Pakistan's claims over Chitral, Bakshi's repudiation of Pakistan's claim and the historical support for India, Exodus of Hindus from Pakistan, burning problem of Kashmir and the recent border incidents, the peaceful settlements of Naga problem, France's magnanimity in proclaiming Morocco an independant state, under the Franco-German Treaty, the reincorporation of zaar in Germany, freedom for Malaya, Dissolution of Cominform, Nationalist movement in Africa, exciting events in the Cyprus, Eisenhower's second term of office, Portugal's claim on her right over passage over Indian territory in the World court at The Hague, the anamalous and the abominable situation which is going on in South Africa with regard to the Indians and in Arkansas in South America with regard to the Negroes and lastly but the most important of all the launching of Satellites by Russia are all not incidents of chance coincidence but a

matter of some significance and with that object only I have been, to give you, my readers, an idea as to what is going on around us, trying my best in this section. To settle all those, " violence in a national or international context is a cowardly escape from democratic process. It is a 'treason to our past and to the future and hence let us hope those will be settled by ' disciplined, cooperative, non-violent and peaceful spirit ".

Local...

It is now time for me to look into our own and see what is going on around us.

Transfers...

Staff in Stanley are like sibian virgins who are in the constant danger of being carried away by the frantic admirers. Ever since the begining of this academic year, Stanley Medical College Association was busy in conducting meetings—farewell meetings only and let me touch on this topic. As a result of the transfers, mushroom parties with their totems and taboos by the various sub-committees were arranged without giving the General Secretary a chance to arrange for a common party constituting the General body. Of course, we conduct farewell meetings. We speak emotionally on such occasions as Romeo in Shakespeare's Romeo and Juliet said, ' Parting is such sweet sorrow ' and there ends the meeting and thereby the matter. That is not all. In the place of one pompey we don't get a Julius Ceaser, in the place of one Nelson we don't get a Duke of Wellingdon, I mean efficient hands are not replaced by equally efficient hands and hence the trouble. I don't want to mention any particular department which is depleted of its efficient head. If the authorities concerned want to accumulate all the well trained staff in the Madras Medical College and General Hospital, they can as well ask the students of the Stanley Medical College to go to the Madras Medical College and have a combined lecture along with them. I am voicing forth the view of the general body and if any body feels that I am a bit vehement in my criticism and expression, my apologies are there. We were trying to approach the then Dean to request him to do something, and by the time we approached him, he was on his verge of transfer ! We could only meet him in the station on the day of his departure for Kerala. Hence we request the present Dean to view this a bit seriously and do the needful for the students.

Resignations...

We were very proud and indeed extremely happy in having a young charming little boy with his infant precocity and impetuosity of temper as our general editor. His early enthusiasm, his energetic effort, solid foundation and sterling support for the magazine were remarkable and we record it with all gratitude. But the most unkindest cut came from him in the form of his resignation like a bolt from the blue, especially when were trying to bring out the issue in time.

Tendering resignations and if called for, offering explanations have become the fashion of the day just because it is only a thankless and honorary job. Nobody

invited us to come and take charge of the posts. We volunteered and vied with each other for the posts and hence when we are true to our conscience that we represent six-hundred and odd of the general body in the executive committee, are we not expected to show some sense of responsibility? I don't philosophise on any body's resignations and that is not my concern also. Let this be clearly understood lest it will breed bad blood. I am not cantankerous in my criticism also. I am only just touching it with a view not to hurting anybody's feelings but with a view to making them realise that in the future let self be not our concern, but service our motto.

Short story competition...

This year we instituted a new programme in our journal to provide a field for cultivating the power of expression by voicing their views and opinions on the problems of the day in a representative manner and recording their activities—i.e. a short story competition. Owing to lack of entries we have to give it up and hence we apologise for our inability to carry it out successfully and at the same time we thank the contributors for their kind cooperation—

1. Mr. Subbuswamy.
2. Mr. T. A. Manickaswamy.
3. Mr. P. S. B. Kumar.
4. Mr. Ananda Padmanabhan.
5. Mr. Gnanagurudasan.
6. Mr.Parameswaran.

Debating Society...

" Full many a flower is born to blush unseen and waste its fragrance in the desert air ".

To avoid such above mentioned events, we can bring forth the latent speaking capacity of those who may shine when such opportunities are made available to them. Just as there are only a few sportsmen who take part in all the sports activities, there are only a few speakers who take part in all the debates and meetings. So to have their latency brought forth, I request the General Secretary to arrange for debates and give them the opportunity so that they can expose the latent talent on such occasions.

Clinical Society...

The clinical society is undergoing inertia. The maximum peak curve which it enjoyed some two years back is coming to touch the base line this year, and I request the ex-officio secretary who is the student vice-president, to see that it does not touch the base line. I further request her to conduct at least in the next term as many meetings as possible.

Typewriter...

It is with a throbbing heart that I mention that we have been able to have a separate typewriter for our journal this year and that is our fiirst achievement. We sincerely thank all the first years for their kind contribution in the form of donations in the midst of opposition.

Funds and the future...

A vicious circle is going along with regard to the clearance of previous issue's arrears for the past two years. We repeatedly kept informing the then ex-officio vice-president that we would not take any responsibility as regards the previous issue's arrears and that the entire receipts for the current year should rightly come to us, so that we can manage to bring out the issues without strain and financial stringency. He agreed to it and it is only with this understanding that we did start work. But contrary to all and to our utter disappointment, as we look into the books we find 200 Rs. deficit in our account. Can any one imagine whether it is possible to bring out two or three issues of the Journal, every year, for thousands of rupees mainly depending upon the resources by way of advertisements? It cannot be continued and must be put an end to and curbed at once. And so with a view to helping my successor and to enable him to start with 'fresh hopes and fresh confidence' I may be forced to stop with this issue only for the whole of this year, and I hope, I have made myself clear and my friends will not mistake me and misunderstand me if I do so and that too not of my choice but of sheer necessity.

Journal and the Editors...

In accordance with the custom and tradition of the editors of the Journal of the Stanley Medical College let me also make my woes and echoes. Owing to the repeated requests of the previous editors the response in general is remarkable, but at the same time it is discouraging to note that just a single article was received by us from a lady student of our college and I do not know how to account for their sudden non-co-operation in this field. Of course the bosses flooded us with their articles unlike previous years and we thank them sincerely all those who helped us in the form of their articles and we regret to note that we had to give up some of the valuable articles both from the students and the bosses owing to lack of space and we hope to publish them if we bring out another issue, in next term.

As regards the editor he is a "man more sinned against than sinning". As soon as he becomes the editor (of course no fault of his but ouly a bit ambititious) he is destined to undergo all sorts of hardships and mostly and that too recently financially. Let us put an end to this sort of attitude. Let the editer be considered as a mirror through which we look into ourselves, a vocal cord by which we voice forth, and let him be given the honour and respect due to him and that too what he deserves.

With the noble contributions of the bosses, superimposed with the kind and courteous assistance of my friends, I place this surgery issue in your hands.

Looking forward to your further cooperation and contributions,

Yours sincerely,

R. Krishnaswamy, B.A.

General Editor & Publisher.

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Dr. S. BALASUBRAMANIAM, M.S.,
Our New Dean.

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Dr. C. RAGHAVACHARI, M.S., F.R.C.S.,
Our Ex-Dean.
"Here was a man, whence cometh such another"

FAREWELL ADDRESS

PRESENTED TO

DR. C. RAGHAVACHARI, M.S., F.R.C.S.,

DEAN,

STANLEY MEDICAL COLLEGE

The most beloved and respected Sir,

It is with a heavy heart, with the strength of love and depth of grief that we assemble here on this unostentatious occasion to bid farwell to one, the Dean of this Institution - a Dean by your Office, but a daddy by your affection; a teacher by your profession but not a task master—one, who has dedicated the self and service to the student community and one who has attunded with the Alumni of our Alma Mater.

Sir, we have found in you the wisdom of Solomon, the skill of a swordsman and the service and sympathy of the Samaritan. Your magnetic personality, the marvellous method of your exposition, the Marathon lectures for four or five hours for the final years, the disposition of your depth of knowledge, the dexterity of execution, your sterling character and your sagacious counsel have been a boon and an asset to us; and Sir, in your going away from Stanley we shall miss a personality - a personality of rare combination of the Spiritual splendour of the past and the intellectual brilliance of the present.

Today we find it very disheartening to resist the intoxication of your sweetness and to shut our hearts to the enchantments it so lavishly presents. Sir, we have given many a goodbye to many but the way you carry away the citadel of our heart is an abiding memory, which we Stanleyans would not lose even for the world.

We, the students of the Stanley Medical College, with the noble tradition behind us, will have our consolation, Sir, if only you reserve a corner in your heart—wherever you are, in whatever part of the world—for us, who once upon a time when you were here loved you abundantly and extravagantly.

MAY THE ALMIGHTY GRANT YOU LONG LIFE!

MAY HE SHOWER HIS CHOICEST BLESSINGS ON

THIS "TENDEREST, NOBLEST AND THE BEST", Stanley had ever seen, who is now on his pilgrimage to embark upon

"New ventures and Pastures new".

We remain,
Sir,
Your loving Students of
THE STANLEY MEDICAL COLLEGE

MADRAS-1,
September 9, 1957.

We bid goodbye and wish godspeed to . . . .

DR. C. RAGHAVACHARI, M.S., F.R.C.S., our beloved Dean and Professor of Surgery, after two decades of service and sacrifice to the student community of the Stanley Medical College, left for Kerala on 15th September 1957 to take charge as the Professor of Surgery in the Trivandrum State Medical College. Popularity is his name and selfless devotion is his hobby. He not only attuned with the almuni of our Alma Mater but also in all the curricular and extra curricular activities and we really felt that we are sending a gem.

DR. M. NATARAJAN, B.A., Mch. (Ortho), F.R.C.S., our Vice-Principal and Orthopoedic Surgeon, Stanley Hospital, as Reader in Orthopoedics, Madras Medical College and Orthopoedic Surgeon, General Hospital. He was a student of this College and ever since his admission he was the sole monopolist of all the medals and prizes, and in short, he is the intellectual giant of this Institution and a brilliant product of our Alma Mater. Although he was a bit strict, he was social and simple. An ideal teacher with his encyclopoedic knowledge.

DR. K. G. KRISHNASWAMY, M.S., Professor of Operative Surgery and Surgeon Stanley Hospital as First Surgeon, General Hospital and Professor of Surgery Madras Medical College. His magnetic personality and his marvellous method of dealing the subject was a treat to us. He is practical in his personal approach to the subject, I mean an Ideal Professor.

DR. HARIRAJAN, F.R.C.S., our Surgical Registrar and Asst. Surgeon Stanley Hospital as Lecturer in Principles and practice of Surgery, Madras Medical College. He is a young doctor with his life's ambition and ideals and aspirations leading on to his achievements. He is a good humourist. His luxurious limousine, his magnanimity towards proxies and his well built stature are some of his noteworthy features.

DR. A. R. GOVINDA RAO, M.B.B.S., M.S. (Yale), Our Professor of Pharmacology as Professor of Pharmacology, Madras Medical College. An extremely knowledgeable professor, he is unique in his inimitable teaching and method of dealing with the boring subject. A maiden look and a smiling face are a treat to us. His brilliant thesis on Barbiturates are some of his contributions to the Pharmaceutical world. He always has a liking for Stanleyans and we can hope that he will remember and recognise Stanley Students wherever he meets them ! Let us hope.

DR. V. A. RAMAMOORTHY, M.B.B.S., M.SC. Assistant Professor of Anatomy Stanley Medical College, as Vice Principal, Kurnool Medical College, Andhra. He can teach Anatomy anywhere we meet him extemporely, but he is a strict disciplinarian. A very enthusiastic teacher who likes to help the students in times of examinations, suggesting probable questions. His simple and stylish teaching are his characteristics...

We welcome . . . .

DR. S. BALASUBRAMANIAM, M.S., as our New Dean. He is not completely a stranger to us; and was associated with our institution in some other ways, some years ago ; in short, he was and is a Stanleyan product. In his capacity as the District Medical Officer at Coimbatore and Tanjore, he proved the mettle. He gives easy access to those who approach him, inspires confidence and provides allowance for varying opinions. An experienced Surgeon, an able and strict administrator and an affectionate elder, his way to abounding popularity is not far off.

DR. K. RAMACHANDRA, M.D., as our New Professor of Medicine and Physician Stanley Hospital. He is our new Staff Editor. His wide and varied knowledge, his harmonious tone and his keen interest in imparting his clinical knowledge are some of the welcome features. A kind and generous hearted gentleman with his ocean of medical knowledge.

DR. G. ATMARAMA RAO, M.S., as our First Surgeon, Stanley Hospital and Professor of Surgery, Stanley Medical College. He is an eminent Surgeon, a very good sportsman. He has good voice, an impressive delivery and the proverbial gift of the gab. He is inspired by the singular zeal of the academic pursuit of surgery and intellectual discipline par excellance, and indeed he is a disciplinarian. Bright look and brilliant talk are some of his noteworthy features.

DR. A. A. ASIRVADHAM, M.S., Our Professor of Operative Surgery and Surgeon Stanley Hospital. He has been a warden sometime ago and his fatherly feeling and brotherly affection are still green in our memory and we can expect the same from him without a shadow of doubt. His simplicity, his honesty of purpose and his generosity are all well known to us. An extremely kind hearted gentleman.

DR. T. R. KRISHNAMOORTHY, M.B.B.S., M SC., Our New lecturer in Pharmacology. He has got a wide and varied experience as a teacher in other institution and hence we can expect a good deal of knowledge and imparting capacity from him. He is good humoured and soft.

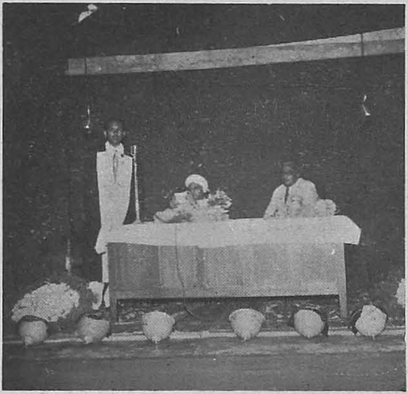
DR. R. A. VARMA, M.S., as lecturer in Orthopoedics and Orthopoedic Surgeon Stanley Hospital. He is very kind and considerate towards students as well as to the patients. His wide experience in the surgical field will be of immense use to us.

New wardens . . . .

......Dr. V. VEERASWAMY, M.B.B.S., Our New General Warden. He is getting accustomed to this Stanleyan environment and he is doing fair deal to all. His rules and regulations in times of crisis as in cholera time show that he is a man of action.

DR. C. S. LAKSHMINARAYANA, M.B.B.S., Our New Mess Warden. He is always busy with supervising, consulting the secretaries and methods to improve the general condition. He is always enthusiastic to do anything for the students.

The President Welcomes....



(R. KRISHNASWAMY, B. A.)

Illustrious son of India, Respected Dean, Learned Sirs, Graduates of the year, Ladies and Gentlemen, and my Friends !

On this happy and memorable day with pleasure and privilege superimposed with a feeling of joy and jubilation doubly enhanced with the presence of our famous speaker, I stand here to day to welcome you all for today's function which is the climax and consummation of all our functions.—I mean the reception to the New Graduates.

We are lucky and extremely fortunate in having amidst us one of the famous sons of India, a versatile genius, a legal luminary, a seasoned statesmen, an able administrator, a cultural champion and above all an outstanding orator. If you know there was one Demosthenes in Ancient Athens - the Divine orator as some historians put it, if you know there was one Edmund Burke in the 19th century England the gifted orator as some historians put it and still if you know there was one Rt. Hon. V. S. Srinivasa Sastri the Silver tongued orator, I take it for granted that you know all about Dr. Sir C. P. and in short it is the quintessence. This political philosopher and the practical politician, this serious-minded statesman and the scholarly expositor Sir C. P. is famous, not only in India, but also he is an international figure. The various offices he has been occupying, the anecdotes and the related episodes in connection with the offices he has been occupying are but historical and it will be a separate topic for me if I try, in vain, to deal with it and hence I confine myself only to the welcome part.

Sir, We welcome you with profound pleasure and due reverance and respect.

Graduates of the year, you would have had a beautiful and brilliant exposition about your future responsibilities and duties when you were sitting in the Convocation hall of the University of Madras a week ago.

When I think of the golden opportunity you are having before you and the golden advice you are to receive from this speaker, I don't think that it will serve any purpose in my unnecessary dealing with the topic. Any how in my capacity as the President of the Association let me make a few remarks.

The world at large is at cross roads. The dynamic surge of a scientific civilization has promised mankind to relieve them from the handicaps of poverty, ignorance and disease. At the same time the creative genius of man has fostered a towering structure of technology threatening the world with cataclysmic col apse. Mankind do not know whether to choose the side of the sanity or the side of suicide. Amidst the hopes of one world we see the possibility of no world at all and those who live in a fool's paradise have no patience for a Jeremiah who might disturb their sleep. Peace in short has become the one like that of the Tantalus Cup which is nearby but is useless.

Graduates of the year, let us take to day the heavy responsibility, to work for the promotion of peace apart from our usual and destined role - the role of the Good Samaritan - I mean to serve the the sick and the suffering.

Five or six years back, you would have been welcomed by my predecessor, a welcome which is entirely different from that of this. Now after your brilliant success in the recent examination with a bright future ahead of you, I, the president of this Association welcome you once again as the proud products of our Alma mater amidst us.

Ladies and Gentleman, Distinguished guests, the elite of the city and my friends - to all those who have responded in a large measure to our humble and kind invitation, I extend a hearty welcome. Our Art's Secretary Mr. Stanley, in spite of his crowded and unavoidable engagements as he is the captain of the basket ball team of our college, has come forward to present you with a veritable treasure of his variety entertainments, of course a bit lengthy and may request you sirs, to remain witness, enjoy and thereby encourage our young actors who are participating in to-day's function.

MAY I ONCE AGAIN WELCOME YOU ALL !

Toast to the Graduates

T. K. GURUMURTHY,
General Secretary.

Mr. President, Distinguished guests, Respected Dean, Learned members of the staff, and Dear friends,

It gives me great joy to stand before you and say a few words by way of a toast to the new Graduates. It is customary for a younger brother to say a few words of good luck and Godspeed, as the older one leaves on a voyage. As such, as you are leaving our Alma Mater I, as a younger brother wish to say, a few words. I think it is superfluous to say good luck to you since luck, you will have always because luck always goes with pluck. I also presume to advice you : have all sorts of experience, good and bad, pleasant and unpleasant. If life has anything to offer us, it is merely experience and experience alone. And so grab it by all means.

Some of you might have been married. Some will propose to in future. But to all of you I commend a mistress. Yes, make success your mistress. Dame Success is very elusive, but nevertheless, cajole her, coax her, woo and win her some how. Lastly, always be a youth. Youth is not as much a stage in life as it is a state of mind. Bask always in the spring sun shine of youth.

Friends, with these few words, I end my toast, once again wishing you all good luck and godspeed.

Thank you all !

Reply to the Toast

DR. C. S. RANGARATHNAM, M.B.,B.S.

Mr. President, Revered Dean, Distinguished guests of the evening, Professors and Friends !

It gives me great pleasure to speak on behalf of the Gruaduates of the year. I thank you most sincerely for having given me this privilege.

We, the gruaduates can always look back upon the years we have spent in this great institution with pleasure and pride. Ever since the day we entered the portals of this college we were influenced by the spirit of co-operation and teamwork that pervade this atmosphere. The one particular feature which has endeared us to this place is its utter freedom from formality between the staff and students–we walk into Stanley as into our homes.

This stands to the credit of our teachers whom we owe what we are to day. I cannot but convey our heartfelt gratitude for their brilliant teaching and guidance and we feel we are extremely fortunate in having their rich experience and erudition at our disposal. I would like to make particular mention of the efforts of Dr. A. Anantanarayana Ayer, Dr. C. Raghavachari, Dr. K. G. Krishnaswamy and Dr. N. Vaidyanatha Iyer.

We hope that newcomers will keep this tradition of this institution steadily before their eyes and that they will endeavour to enlarge the sphere of its usefulness and influence. Finally I assure you on behalf of the Graduates that whatever and wherever we are, we shall carry ourselves in such a manner that will keep up the great name of our Alma Mater. Thanks to the beloved members of the staff, we are all well equipped to face our subsequent professional career with confidence.

I conclude by expressing my sincere gratitude on behalf of the graduates of the year to our Association for according this memorable reception.

Thank you all once again !

INTRODUCTORY EDITORIAL

BY

DR. K. RAMACHANDRA, M.D.,

Professor of Medicine, Stanley Medical College,
Physician, Stanley Hospital, Madras.

OUR STAFF EDITOR.

Surgery of the present day has advanced with great strides and solved problems once considered as insurmountable and it has no limitations. It still continues to expand and there is no organ in the human body which is left unexplored with the least detriment to the individual as a whole. The safety of surgery is associated with other advances made in the scientific field. The introduction of antiseptics, the discovery of anaesthesia and the advent of antibiotics have contributed immensely to the safety of surgical techniques. In the engineering and manufacturing side the discovery and manufacture of other accessories have helped the surgeon to quicken the speed of operation and facilitate easy access to the diseased organ. These are very important as surgery is an art, a technique which requires the cooperation of several members, each proficient in his own field.

In every art and craft it is the rhythm and dexterity of the workman's hand which determine the beauty and perfection of the product or work turned out. So also in surgical craft dysrhythmia is not conducive to good work. The nurse, the orderlies and the surgical assistants must be accomplished as the surgeon, who of course plays a major role. Without the cooperation and agility of others, the surgeon's efficiency is damped down. The surgeon requires several hands and these limbs are contributed by the rhythmic coordination of his team.

The anaesthetist is an important and essential hand in an operation theatre. It is he who makes the operation a painless one and it is he who helps the surgeon to bring about relaxation of the muscles in the field of operation ; a great responsibility lies on the anaesthetist who should induce anaesthesia by a suitable anaesthetic and revive the patient after the operation. At every moment during the operative procedure the condition of the patient should be watched and the slightest indication of impending disaster should be detected and suitably combated. The role of the anaesthetist is more onerous than that of the surgeon. Shrewdness, awareness of the situation, presence of mind should be the qualities of a skilled and well trained anaesthetist. Mortality in operation at the present day has been reduced to the barest minimum with the perfection of surgical techniques and improvement of the ancillary methods. Still it should be the aim of the surgeon and the anaesthetist to reduce it to zero. The selection of anaesthesia and pre-operative preparation of the patient are the essential factors which determine the smoothness of the operation and post-operative progress of the patient.

It is only under emergency states that immediate surgical intervention is necessary irrespective of patients' general condition. Neglet on such occasions means intensifying the operative risk ; and the surgeon should go ahead unless the patient is in extremis. All the methods of resuscitating

the patient from the circulatory shock which is associated with surgical emergencies should be adopted and the patient at the same time, must be made ready for an exploration. Very often hesistancy on the part of the inexperianced and conservative surgeon leads to fatal results. Typhoid perforation is an example which when tackled without delay, immediately after diagnosis, leads to high percentage of success. Delay of time in spotting the condition and more time in investigations, apart from the usual red tapism in a hospital are major contributive factors to high mortality. In elective surgery selection of the patient is very important. Close observation of the patients, pulse, respiration, temperature chart, fluid intake, output, acid-base balance are the essentials of success. As each system of surgery has its own peculiar complications which are avoidable apart from the complications common to surgery in any field, the nurse should be well trained in post operative care. The use of sedatives, maintenance of fluid balance, catheterisation and posture of the patient are to be taken note of. In thoracic and neuro surgery several other special precautions have to be observed.

At the present day, abdominal surgery is child's play. The physician has also become surgical minded. Obscure diseases of the alimentary tract have to be diagnosed only by a laparotomy and several cases of malignant diseases have been missed as a result of negligence and want of surgical intervention. The best way of detecting the cause of liver enlargement and the sure diagnosis of peritoneal tuberculosis are by exploration only. As far as therapy by surgery is concerned no part in the alimentary canal has been left unresected or anastomosed. Sometimes major part of of large bowel has been removed, and resection of appendix, gall bladder and stomach are common features in an operation theatre. Despite the mutilating operations, human beings continue to thrive with normal alimentary functions.

Cardiac surgery has come into prominence in recent times with improved methods of diagnosis. It is only the accuracy of diagnosis and proper selection of cases which are important in cardiac surgery. Clinical knowledge has so much advanced along with the diagnostic techniques like angiocardiography, cardiac catheterisation etc. that many diseases of the heart, congenital and acquired, simple and complicated are easily amenable to correct approach. Specialists who deal with cardiac diseases or sometimes only specialising in congenital heart disease, have sprung up solving this problem of correct diagnosis. Several children with congenital heart diseases have been given new life and assured of more comfortable existence as a result of cardiac surgery. Diseases like patent ductus arteriosus, Fallots tetrology etc. are amenable to safe surgery. Acquired diseases like mitral stenosis have become curable conditions. Several techniques and instruments have been designed to separate the adherent mitral valves or sever the fused cusps. Valvulotomy, valvuloplasty etc. are the surgeon's dilemma. Apart from embolectomies and sympathectomies etc. main vessels like aorta are being resected combined with the plastic surgery of grafting the resected part with healthy one. Vessel banks are being maintained and operations are being performed under hypothermic condition to facilitate circulatory dynamics. Another ingenious device which has not been put to practice but still in the stage of research is the substitution of plastic heart valves for diseased ones. All these are wonders in surgery and also help to widen the knowledge of human physiology.

Lung surgery is not new. It is existent for several decades. But techniques have changed. In addition to surgery on the thoracic wall, intrathoracic extensive resections have come into prominence to extirpate diseased areas of the lung. Diseases like bronchiectasis have become curable conditions in addition to tuberculosis, chronic lung abscess, bronchogenic growths, cysts of mediastinum etc. Resection of part of both lungs or one whole lung (lobectomy and pneumonectomy) is

fraught with little interference to the psysiology of respiration. Bronchospirometry has advanced pari-passu with thoracic surgery. It may not be for off before exploratory thoroacotamies will be performed for diagnostic purposes analogous to laparotomies. This will place diagnostic medicine on a sounder footing and well contribute to the earlier detection of malignant disease and its eradication.

Neurology has now become a mature speciality and postgruaduate training in this field is available almost in every advanced country The rigid cranial cavity is explored with little difficulty and space occupying lesions once not amenable to treatment are being easily managed. Several ingenious operations in hydrocephalus have been described and performed with immense amelioration of the distressing features associated with the disease. Several medical diseases like Hemiphlegia due to haemorrhage are fraught with good results surgically. Craniotomy and aspiration of the effused blood are associated with success in a few cases. Tremors of Parkinsonism can be relieved by injection of Alcohol into the substantia nigra or by pyramidotomy etc. Pains of malignant disease which sometimes fail to be controlled by morphia etc. can be permanently relieved by rhizotomy or sympathectomy. There is no necessity of mentioning the great advances in neurosurgery made in the techniques--the approach and modifications in neurosurgical practice which form a separate topic by themselves. Diagnostic neurosurgery has also kept pace steadily with neurosurgical techniques. Neuro radiology and neuropathology are but offshoots of neurology which can improve with better understanding of neuro anatomy and physiology. As with any other branch of knowledge these basic sciences progress pari-passu with better understanding of medicine and surgery and vice-versa.

The world wars have contributed immensely to surgical advances in all directions under imminent dangers and necessity of surgical emergencies. Various techniques and modifications are valuable outcome which are of immense value in civilian practice. Many of the physiological problems have been studied in wounded persons as a result of these wars apart from the terrifying and devastating effect. Neuro surgery has had a sounder footing with added emergencies, and several other branches of surgery such as plastic surgery have developed and been popularised. The surgeon not only operates on diseased organs but also helps to reconstruct and reshape the mutilated organs of the body resulting in bullet wounds, and shrapnel injuries. The ears, nose and other structures responsible for good appearance and physiognomy can be modelled to perfection by the experienced and dexterous hand of a surgeon by graft, taken from various parts of the body. This surgery for aesthetic purposes which can be practised to beautify the face and body silhoutte in civilian life. Just as the sculptor with all his imagination and power models out of clay par excellence cast of a beautiful figure, so also the surgeon has to use his skill to reconstruct a figure endowed with living charm and chiselled features. The ugly can be made the best of features and the surgeon specialised in plastic surgery can practise it as a hobby.

Bone surgery as a result of the wars has become a major speciality and every teaching hospital or big institution at the present day has a separate orthopoedic department with a skilled orthopoedic surgeon as its head who deals with diseases, deformities and injuries of the bony skeleton and its joints. The knowledge of several bone diseases has so much advanced that it becomes a subject difficult to master in one's life time. Treatment of fractures and the physiology of union have thoroughly changed that a general surgeon finds hard to catch up with the changing concepts. Plaster of paris has been substituted for splints and this has facilitated the orthopoedic specialist to solve the problem of immobilisation of limbs which forms the basis of his practice and without which the surgeon's task in a base military hospital would have been pitiable. Bone

operations and the use of bone grafts to strengthen the weak areas in the skeleton are other features of interest. Apart from operations, the concept of wound healing and wound surgery has taken a new turn. Dressing of wounds is an art by itself. It is understood at the present time that local use of drugs interferes with healing and all that is required is to keep the wound clean and dry. Use of prophylactic sera to ward off complications have come in the vogue after the experiences. The knowledge of burns and their treatment are worth mentioning. It is agreed that resuscitation of the individual by use of plasma blood etc. is the important basic principle in extensive burns. The burns heal by themselves if patient survives. The use of skin grafts later are part of aesthetic surgery which helps to epithelialise the burnt area. Blood bank services have come up from the times of war and no surgical hospital is without a blood bank. These are important accessories in surgical practice which reduce mortality.

The advances noted in the present day is only the beginnings of the revolutionary period. Surgical practice still more is to come. It can be prophesied that diagonstic medicine will, in the future, be the speciality of surgeon. Clinical acumen and findings though helpful may not have a place as important as surgery in diagnosis. This will solve the many difficulties experienced in conclusive diagnosis especially malignant diseases. All are unanimous in the opinion that the malignant diseases are fairly common but their early detection is difficult and this problem can be solved with sympathy and clarity if surgery is adopted in the detection. To be definite is to see and be convinced, and day to day the human mind is heading towards this direction. The stethoscope and the roentgen films, though useful, are gradually going out of fashion and this should be the aim of the sound and progressive medicine to substitute direct vision and correct diagnosis rather than indirect and deducive laboratory aids.

So they say

Science without Religion is lame ;
Religion without science is blind.

—*Einstein.*

If we could learn from mere experience, the stones of London would be wiser than its wisest men.

—*G.B.S.*

I will not refer, defer, confer, prefer, differ ; I renounce the whole family of fero. I embrace absolute life.

—*Emerson.*

Out of purity and silence comes the word of power.

—*Vivekananda.*

Do not worry ; eat three square meals a day, say your prayers ; keep your digestion good, exercise ; go slow and easy.

—*Lincoln.*

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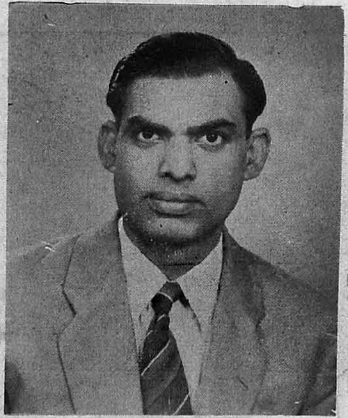

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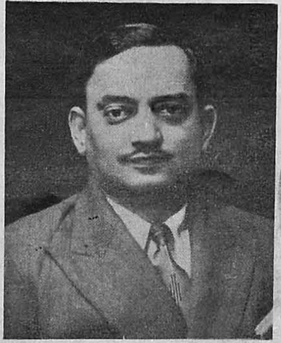

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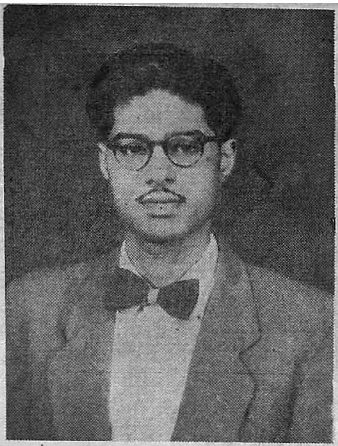

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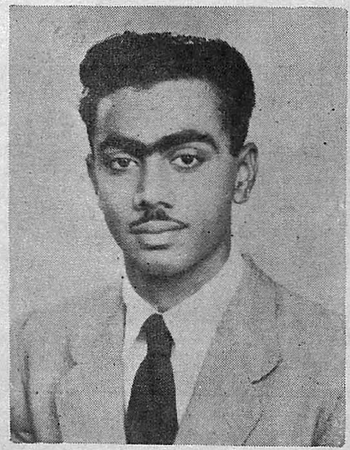

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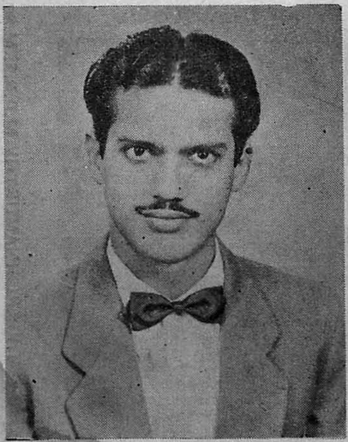

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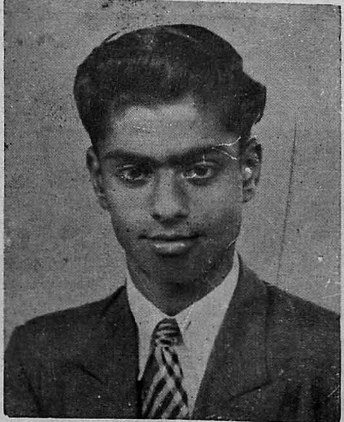

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Surgery of Acquired Heart Diseases

• BY •

Dr. R. MAHADEVAN, M.S.,F.R.C.S.(Eng.)F.R.C.S.(Edin.),

(Professor of Surgery, Madras Medical College – on leave)
Surgeon, General Hospital, Munnar.

It is just under two decades since surgery of the heart and great vessels came within the realm of practical possibility. Many spectacular advances in the field have occurred and many more of even greater significance are likely to be achieved in the near future. To give just one example of what is possible, the heart has been completely and successfully transplanted from one dog to another, (Neptune, et al., 1953). In three such cases, the heart functioned normally and even the E.C.G. was apparently normal. True, the longest survival of the animal with such a transplanted heart was only six hours, but the achievement has opened a vast field of great importance. It shows that transplantation of heart in the human will not remain a dream for long.

I feel that it is necessary to impress on the students that if they take an intelligent interest in these achievements now alone, some at least among them will one day be able to perform these operations.

These spectacular achievements, following in quick succession one after another, strike an awe and wonder in the minds of not only the students, but in the minds of many medical men too, that they assume these things as something beyond their reach. As such, they take no more than a passing interest in them. They just give up any attempt at understanding them, and consider them to be of no practical utility. This is an incorrect and unfortunate attitude. Until and unless all doctors realise what surgery can do for the victims of congenital and acquired heart diseases, these patients won't be referred to the special clinics for surgical treatment. Moreover, these operations are within reach and practical possibility of many in the profession, provided they strive for it. Striving for it means a minimum of five years experience in general surgery and training in thoracic surgery for at least 2 to 3 years, preferably in clinics where these operations are done in large numbers. These clinics are at present far and few even in America, U.K. and Europe, even with their better finances and availability of large number of trained personnel. In our country, the clinics are even fewer, but I have no doubt whatever, that candidates wanting to get trained will be willingly taken on, in one or the other of the clinics. The number of invalids in our country due to congenital and acquired heart diseases is enormous. If all these patients are willing to be operated on, at present we just have neither adequate number of places equipped for tackling such cases nor trained personnel, This situation is not obvious, because even the medical profession has not yet taken kindly to advising surgery even for cases where surgery is obviously indicated and results of operation for some of these conditions at any rate have been shown to be good: Of the few patients that do get the advice, a good proportion refuse surgery. This state of affairs will however surely alter, though,

maybe, gradually. It is essential that the medical student realises that these operations can be tackled in many hospitals, provided there are anaesthetists with special training, adequate blood transfusion service, facilities for oxygen therapy and certain minimal equipments. A " blood-bank " is perhaps ideal, but for individual cases it is possible to collect beforehand requisite quantity of blood from relative and friends and keep it ready. What I mean is, one should not be under the impression that such operations are possible only in large teaching institutions with all sorts of special facilities. For e.g. operations for mitral stenosis have deen done in fairly large numbers, in more than one institution of what are called " Cottage Hospitals ".

Though success in the field of cardiac surgery is very recent, some of the brilliant ideas had been conceived decades earlier. The actual accomplishment had to await advances in anaesthesia, the advent of chemotherapy and antibiotics, blood bank service, improved methods of diagnosis like angiocardiagraphy etc. Cardiac conditions that can be cured or ameliorated by surgery can be broadly classified into (a) congenital anomalies, (b) acquired lesions. Congenital anomalies account for only 2% of all pathological lesions of the heart and great vessels. However, majority of the early and spectacular achievements and lessons learned were in connection with tackling congenital heart diseases. The suceessful ligature of patent ductus In August 1938 by Gross may be said to be the first distinct landmark of far reaching importance that opened up the enormous field for cardiac surgery.

Among the various acquired lesions of the heart, where surgery can be of benefit may be mentioned (1) Injuries, (2) Sequaelae of rheumatic infections (3) Conditlons due to various other causes. (4) Constrictive pericarditis, though rare, requires special mention as being the result of tuberculous infection. Rheumatism is one of the chief causes for various pathological conditions of the heart of which mitral stenosis is the commonest. Among the various other acquired diseases may be mentioned coronary insufficiency, hypertensive heart diseases, pulmonary heart disease, intra cardiac tumours, aneurysms of the heart etc. I propose to consider in this article (1) Injuries, (2) Mitral stenosis, and (3) Chronic constrictive pericarditis.

INJURIES

Naturally these have to be tackled preferably at the nearest hospital, at the eariest possible moment. The earliest record of successful suture of injury to the heart is by Rehn in 1897. In the last war, Harken and his associates successfully removed more than a hundred foreign bodies from within the heart and great vessels without a single death (Ogilvie, 1945). Some of these patients had to be operated on more than once, resulting in 139 operations. Fifteen of these were for foreign bodies in the heart chambers, and in one case, the same heart was operated on three occasions to remove a bullet that drifted from chamber to chamber. In the end success was achieved. Surely such achievements look like a page from the romance. The romances have become realities.

Large wounds of the heart and great vessels are immediately fatal. What follows, applies to cases where the injuries are less serious but the patient may even be in extremes. It is generally agreed that wounds of the heart should be operated upon if there is continuous bleeding to the outside or into the pleural cavity. When on the other hand there is acute cardiac tamponade without bleeding, open operations are better deferred until the effects of at least one pericardial aspiration have been determined (Blalock, 1951). It has been found that majority of such patients will respond favourably to one or more aspirations. The bleeding into the pericardial cavity may not recur and an operation may not de necessary in every such case.

The characteristic signs of acute cardiac compression are, [Beck's triad for acute compression] :—

(1). A small quiet heart.

(2). Rising venous pressure.

(3). Falling arterial pressure.

Aspiration is done by directing the needle upwards and backwards through the angle between the xyphoid process and left costal margin ; or by backwards through a point about 2 cm, to left of sternal margin in the 5th interspace or close to left sternal margin so as to avoid the intrenal mammary artery. Of all the various points mentioned above for tapping, that just to the left of the xyphisternum is the one more frequently adopted. In large effusions, some recommend tapping at a point external to apex beat. Dangers in tapping are, injury to the internal-mammary artery and coronary vessels or to the heart wall itself. The needle used must have a short bevel and a fairly wide bore. The tapping can be done under local anaesthesia. The pericardium may have to be explored in some cases. The triad of findings justifiable for pericardial exploration are :—

(1). A wound over pericardium.

(2). No evident pulse or blood pressure.

(3). *Faeces and urine in underwear.* This last finding (according to Elkins) is symptomatic of extreme relaxation of sphincters which is rarely observed in other severe thoracic iujuries during the life of the patient.

It is no use waiting for recovery from shock, With simultaneous administration of fluids (and blood if available) the operation must be proceeded with, and bleeding must be arrested. If the heart muscle is torn, bleeding is controlled by digital pressure over the opening, and the torn margins are brought together with mattress sutures. Care must be taken to avoid coronary vessels. If they are in the way they must be avoided by underrunning mattress sutures. Sometimes the local application of an absorbable haemostatic sponge such as Gelfoam will control oozing, which is otherwise uncontrolable.

MITRAL STENOSIS

Rheumatism is the ehief cause of mitral stenosis and other valvular diseases of the heart. Rheumatic affection is common and found universally. It has been estimated that 0·5% to 1% of the community is affected by rheumatism, particularly in those areas where rheumatic fever is endemic. About 85% of these, develop deforming valvular diseases of the heart, the mitral valve being the most frequently affected, accounting for fully 25%. The other valvular diseases are, mitral regurgitation, aortic stenosis, aortic regurgitation and tricuspid stenosis. Organic stenosis of the mitral valve is probably the commonest single end result of rheumatic infection, although organic aortic valve disease in the form of regurgitant lesion is rated an equal by some. It has been estimated that in United States alone, it is probable that there are close to a million persons suffering with mitral stenosis (Bailey et al., 1951).

Medical therapy alone has so little to offer in many cases of mitral stenosis. In patients afflicted with this malady, in addition to handicapped activity, invalidsm, ever present danger of embolism due to vegetations etc., the life span also is shortened. Since a stenotic lesion is essentially a mechanical stricture, direct surgical attack is the logical treatment. This was pointed out by Sir Lauder Brunton as long ago as 1902 He clearly stated that the logieal approach to the problem of mitral stenosis is to lengthen the slit.

Mitral stenosis markedly interferes with left ventricular filling and thus with systemic cardiac output. Many such hearts are unable to increase their output over and above the resting bodily requirements. Patients in such a state are unable to perform any appreciable amount of work and become dizzy and faint upon exertion. Because the output of the left ventricle is below normal, the aorta remains small. These findings are consistent with the thin and rather underdeveloped condition of these patients. As the egress of the blood

from the left auricle is impeded, increased pressure and great, and even enormous dilatation of this chamber results. The high intra-auricular pressure is transmitted to the entire pulmonary vascular system and thence to the right ventricle. A chronic pulmonary hypertension ensues, with eventual rupture of pulmonary arteries (haemoptysis), pulmonary oedema (dyspnoea), and right heart failure (enlarged liver, ascites, and peripheral oedema). The pathological process and the actual degree of obstruction of the mitral valve are practically invariably much more advanced than the clinical symptoms would suggest. Thus, it is rare for a surgeon to be able to readily insert the tip of his index finger through the mitral valve, in apparently early or clinically mild cases of the disease i.e. *the pathological changes are much more advanced than the early symptoms would suggest.* The train of events described above, can be cut short by dilatation of the mitral valve by introducing a finger into the stenosed orifice and gently dilating it. The digital dilatation results in the separation of the line of fusion of the margins of the valve. The line of fusion is referred to as "Commissure" and so the operation is usually known as "Commissurotomy". (Also known "Valvulotomy" and sometimes refered to as digital dilatation or finger fracture of the valve). Sometimes the fusion may be very firm and calcification in the area of the commissure might have occurred. In such eases division of line of fusion by a specially designed "Valvulotome". will be required.

This dilatation of the orifice by a finger introduced through an opening made in the left auricular appendage was first successfully performed in 1925 by Sir Henry Souttar. The patient was known to be doing well at least six years later. Yet, no such operation was successfully performed for nearly another twenty years. It had to await advances in anaesthesia, blood bank organisation, antibiotics etc. The success of Gross in ligating patent ductus on August 26th 1938, and the various achievements brought about by the necessity of the second world war, established all the necessary conditions for the enormous advances in surgery of the heart and great vessels, which proceeded apace.

Commissurotomy is a simple, relatively safe, direct method of re-establishing a normal type of valve function. It has the great advantage of direct digital guidence. That it effectively accomplishes the desired result is shown not only by the marked clinical improvement, but also by objective physiological studies.

Selection of Patients For the Operations :—

As Brook has mentioned "The indication for Commissurotomy in Mitral Disease is the Existence of Mitral Stenosis." This clearly enunciates what has already been explained viz. that the pathological changes found at operation are much more advanced than anticipated, even in cases with "Early Symptoms" In other words, the operation sdould not be reserved only for those who seem to have a severe type of mitral stenosis. In selecting patients for operation great attention should be paid to the symptoms of dyspnoea. Nocturnal paroxysmal dyspnoea is an urgent indication for operation as these patients have a peculiar tendency to develop a sudden lung oedema which may be fatal. Fortunately, dyspnoea, a more favourable symptom often preceds haemoptysis and when employed as an indication for urgent surgery provides the best results. Haemoptysis is a danger signal that severe pulmonary capillary damage has already developed and though by no means a contra-indication to surgery, the results of hypertension may well have proceeded beyond the possibility of relief.

Contra-indications for Commissurotomy may be stated as follows :—

(1). Any systemic or cardiac condition which would render cardiac surgery too riskey e.g. extreme feebleness, hepatic or renal failure, or irreversible cardiac damages.

(2). *Age*:—Some think that the operation is better not done before twenty or after fifty. But, Bailey and others have operated on extremes of age-youngest 4¼ years and oldest 59 years. At any rate, when medical treatment has failed and does not control dyspnoea, nocturnal orthopnoea or haemoptysis, operation must not be refused on the score of age alone.

(3). Rheumatic activity.

(4). Sub-acute bacterial endocarditis (until controlled by chemotherapy and antibiotics).

(5). Obvious multivalvular lesions—Here it may be remarked that with increasing experience, patients with both mitral and aortic stenosis have been operated on and operations on both valves have been successfully performed at a single sitting (see below).

(6). Extreme cardiac enlargement implies severe myocardial damages-but one must not mistake the presence of a pericardial effusion for a very large or dialated heart.

(7). Persistent heart failure-but certain extreme mechanical burdens e.g. tight mitral stenosis may render all medical measures ineffective.-A calculated risk can and must be taken in such cases.

(8). Gallop-rhythm uncontrolled by medical measures.

(9) Fibrotic or arteriosclerotic pulmonary disease-only if assoriated with cyanosis or patient frankly dyspnoeic at rest.
Sometimes, coexisting mitral regurgitation may contribute significantly to the patients' disabilities. In general, there should be predominently stenosis, although a small degree of insufficiency is not a contraindication to commissurotomy. But moderate or severe mitral regurgitation is a contraindication. Such patients have a large heart with a loud systolic and a short mitral diastolic murmur and a collapsing pulse. However it must be remembered, that the exact diagnosis of mitral regugitation remains difficult in some patients.

(10). Enlargement of left ventricle or a prominent enlargement of right auricle are not favourable type of cases.

(11). A left ventricular preponderance as shown in the E.C.G., in the absence of aortic disease, is a warning against mitral valvulotomy.

The Following are not Contraindications :—

Anricular fibrillation is not a contraindication. It is not a serious operative handicap, though it may not be an ideal type of case. In fact, in one of my cases, the auricular fibrillation that existed, disappeared immediately after commissuretomy (Mahadevan, 1953, 1954)

Arterial embolism is an indication for operation rather than a contraindication. It is the stenosis which causes the embolism and operation may well prevent further catostraphies.

Simultaneous Surgical Correction of Multivalvular Lesions :—

Several surgeons have of late successfully performed simultaneous mitral and aortic commissurotomies. Aortic stenosis is generally considered a " Man's Disease ", but reeent surgical experience shows that it occurs in women also freauently. Aortic stenosis occurs more commonly in combination with mitral stenosis than as an

isolated lesion and the establishment of a surgical technique for combined commissuretomy has become important. The stenosis of the tricuspid valve is another lesion which is also being increasingly recognised at operation. Apparently it is never seen except in association with mitral stenosis, which produces nearly identical ausculating signs. Owing to these reasons, Bailey (1956), says that the cardiac surgeon must be prepared and capable to-day of handling lesions of not only one but of all three valves if necessary (mitral, aortic, tricuspid).

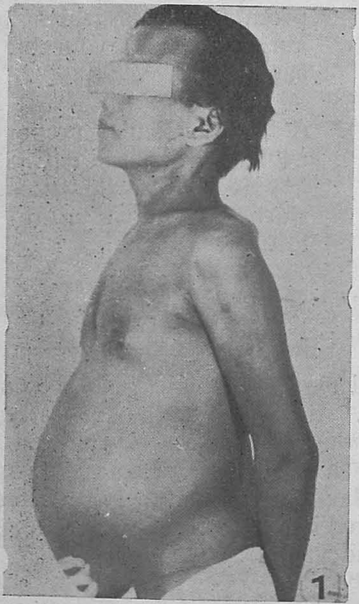

Fig. 1. A case of constrictive pericardities. Note the obvious swelling of the abdomen, as contrasted with the upper half of the body.

CONSTRICTIVE PERICARDITIS

Constrictive pericarditis is another example of acquired disease of the heart, where surgery can bring about a cure or at any rate great relief tantamount to a cure. The condition is much less common than mitral stenosis, but is more common than is ordinarily supposed. The diagnosis is missed in a number of cases, being mistaken for such conditions as cirrhosis of the liver, tuberculous peritonitis, valvular diseases of the heart, pleurisy with effusion, nutritional oedema etc. In this diseases, the heart is imprisoned in a thickened, contracted, fibrosed or even calcified pericardial sac. Consequently, the inflow of the venous blood to the heart is impeded i.e. the filling of the heart and therefore the diastole and systole are interfered with. The heart muscle itself is normal and so, if the thickened pericardium is removed, immediate and satisfactory improvement in its function occurs. Sometimes the condition is referred to as "Restrictive Pericarditis", "Adhesive Pericarditis" and so on, but the term constrictive pericarditis seems to be more descriptive of the true mechanism and is the one prefered by many. It is also

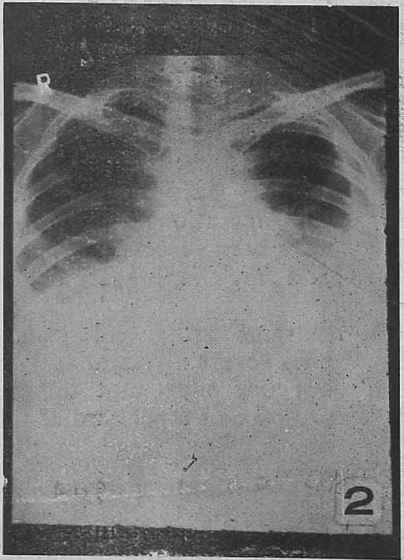

Fig. 2. Skiagram of chest in a case of constrictive pericarditis showing associated bilateral pleural effusion. Note that the heart outline is bigger than normal. This is unusual and may be due to thickened pericardium or an associated pericardial effusion. In some cases the pleural effusion may altogether mask the cardiac outline and an associated pericardial effusion may be altogether missed. For further details see text.

sometimes referred to as Pick's disease, polyserositis and so on, Pick in 1896 having described a condition named by him as "Pericarditic Pseudocirrhosis" of the liver. But long before this, Richard Lower (1669) accurately described the clinical picture and drew attention to the fact that it closely resembles right heart failure (Edwards et al, 1957).

The condition was once thought to be the result of rheumatic infection, It is now known to be wrong. The real underlying pathology in the very vast majority of cases is tuberculosis. While this is not doubted, direct or even collateral evidence is not always obtainable. In some, tubercle bacilli have been demonstrated in the tissues of the pericardium removed at operation, and in some others characteristic tubercle giant cell systems have been found. But, in the majority such proofs are lacking. In a few cases, the disease follows pneumococcal or staphylococcal pyopericardium and even more rarely a haemopericardium. That rheumatism is not a cause of chronic constrictive pericarditis is rather strange, as rheumatic fever is the most frequent cause of acute pericarditis. Indeed, Tudor Edwards and Donald Barlow (1947) pointedly mention, that so far as they are aware, no case of constrictive pericarditis has been reported in whom a mitral lesion has been demonstrated.

Tuberculous infection reaches the pericardium either by direct extention, usually from tuberculous mediastinal glands, or by haematogenous spread from a primary focus in the lung or anywhere in the body. In the established stage of the disease, it may appear as if the pericardium is the only area affected, but in most instances there has been tuberculous infection of the hilar glands, pleura or elsewhere in early life. At the onset, the condition is one of tuberculous pericardial effusion, Soon, caseation and loculation occur (the stage of bread and butter pericardium). Ultimately, extreme fibrosis with or without calcification results. In the severe cases, caseous or calcareous nodules develop within the heart muscle. In about 14% the process proceeds to dense calcification (concretio cordis).

The syndrome of chronic compression (Beck's triad of chronic compression) consists of :—

(1). A small quiet heart.

(2). Elevated venous pressure.

(3). Enlarged liver with ascites.

The onset may be insidious, with gradually increasing dyspoea and oedema. Such a chain of events in an adult of middle age must make one suspect constrictive pericarditis. Swelling of the abdomen becomes a promonent feature and is in marked contrast to the thin upper half of the body (see Fig. 1). One characteristic feature of the dyspnoea is its rapid increase on exertion and quick subsidence with rest. Thus, when the patient walks in, one is struck by his immediate improvement on sitting down (Tudor Edwards et al., 1947). This feature is of help in differentiatiug it from dyspoea of heart failure, where the patient is short of breath even at rest. The veins of the neck stand out prominantly. There may be jugular pulsation. In others, careful examination will show that the pulsation is apparent and is really synchronous with respiratory mevements. In yet others, the prominent veins may collapse during diastole so that they seem to pulsate. The liver is usually enlarged and there is ascites and oedema of the legs. As the disease advanees, there is peripheral vaso-constriction with pallor, cyanosis and coldness of the extremities.

As the systolic contrction and even more so, the diastolic relaxation, are restricted, the pulse is small, and the systolic and diastolic pressures are low, as also the pulse pressure. For e.g. In one the B.P. was 78/60, and it went up to 104/70 after operation. The pulse rate is usually fast, in an effort to ensure required cardiac output. In some cases "Pulsus Paradoxus" may be present i.e. the pulse becomes weak or is completely absent during inspiration and becomes stronger during expiratory phase. This was first described by Kussmaul (1873). It is due to diaphragmatic pull on the obliterated pericardium. It disappears after adequate cardiac release (Tudor Edwards et al., 1947). Auricular fibrillation occurs in 40% of the cases. Visible pulsation of veins under the tongue or high in the neck is regarded as an indication of advanced disease.

The small quiet heart when present, is highly characteristic, but large quiet hearts

do occur and as a matter of fact in the author's series of seven cases, the cardiac outline was larger than normal in three (Fig. 2.). Large radiographic shadows are due to the thickening or calcification of the pericardium. But if the heart is definitely enlarged, there is likely to be evidence of a valvular lesion, such as aortic lesion or there may be an associated pericardial effusion. The apex beat may be visible and palpable. The "Quiet Heart" is more in relation to the appearences as seen under the fluroscopic screen. The cardiac movements may be practically nil and this may be shown in kymogram also (still-heart). Cardiac murmurs are not heard and if heard valvular diseases of the heart must be suspected.

Low grade pyrexia is not unusual but any marked degree of fever is suggestive of active tuberculous lesion in the lung or elsewhere. Effusion may be present in one or both pleurae, in addition to the ascites, hence the alternative term "polyserosites" for the condition. In some cases the bilateral pleural effusion may be so evident that an associated pericardial effusion may be altogether missed, unless specifically looked for after tapping the pleurae (see Fig. 2.). The distended pleura may mask the cardiac effusion and may overlap the cardiac shadows in the skiagram and sereening. In one such case, when both the pleurae had been repeatedly tapped elsewhere without relief, further examination showed a pericardial effusion also, on tapping which over a pint of fluid was drawn accompanied by relief.

DIAGNOSIS :—Constrictive pericarditis must be suspected when a previously healthy Person below middle age develops dyspnoea and odema insidiously. Many of the patients seem to have had no obvious cardiac disease until early in adult life they begin to insidiously develop dyspnoea. In some cases a fortuitous diagnosis is made by noticing the calcified pericardium in the skiagram or in a routine fluroscopic examination. Absence of calcification does not exclude a diagnosis of constrictive pericarditis. As mentioned already, calcification is evident in only about 14% of cases. Diagnosis is easy in a straight forward case. In a typical case the condition may have to be distinguished from pericardial effusion, mediasteno-pericarditis (where there is a large heart with systolic retraction of the chest wall), from valvular diseases of the heart, from other diseases causing right ventricular failure, auricular fibrillation etc.

It is very important to remember that a good many of these cases are wrongly diagnosed as cirrhosis of the liver or as tuberculous peritonitis. In our country it is particularly important to decide if the patient is not suffering from malnutritional oedema, which is one of the causes for polyserositis. Nutritional oedema following protein deficieney and vitamin deficiency is very common in our country. The oedema rapidly disappears with appropriate replacement therapy. Again, oedema and ascites following extreme anaemias result of conditions like askylostomiasis, must never be forgotten. I have seen some cases sent in as ascites, nutritional oedema and so on, where the underlying cause was severe anaemia due to ankylostomiasis. Treatment for ankylostomiasis followed by massive doses of iron and vitamins cleared up the condition in these cases.

Treatment :—This is essentially surgical, which consists in removing the thickened pericardium. If there is active tuberculosis a pre-operative course of streptomycin and P.A.S. or isonex is essential. Fluid collections in the pleura and peritoneal cavities must be tapped more than once, but operation should not be indefinitely postponed to clear up ascites. It must be remembered that repeated tappings have also the bad effect of protein loss. Mercurial diuretics and low sodium diet will help to clear up the water logging. A high protein diet is essential, as also correction of anaemias and vitamin dificiencies. Digitalis is indicated only if there is auricular fibrilation with tachycardia or myocardial insufficiency.

Induction of anaesthesia in these patients require great care, as the heart in this condition is particularly liable to arrest during

induction. A very free airway (intratracheal administration of oxygen and other) with liberal supply of oxygen is essential.

The operation consists in removing the thickened pericardium over both the ventricles, and according to some, over the auricles as well as over the area of entry of superior and inferior vena cavae. Many however feel that left ventricular decortication is all that is necessary in most patients. At any rate, in poor risks cases, this is all that need be done and if necessary further release over right ventricle may be performed at a second sitting. In most instances during pericardiectomy, it is found that the pericardium still shows its primary layers and in these some feel certain (Tudor Edwards et al., 1947) that the removal of the outer layer only does not result in the cardiac release. They deem it essential to excise the deeper visceral layer (epicardium) also, and to visualize the actual herniation of the cardiac musculature through the whole area of the pericardium removed. According to these authors, failure to observe this point will inevitably produce a bad result. However, in one of our most successful cases, when the pericardium was excised the cardiac pulsation which was previously feeble became so good and strong now, that no more was done. The epicardium looked so smooth, shiny and normal that this was not removed at all (Mahadevan, 1956). The patient was known to be doing well, at least 3 years after operation. In another case while removing a costal cartilage and rib to expose the heart, a large unsuspected cold abscess was met with between the pericardium and the chest wall. Evacuvation of the abscess itself caused considerable improvement in the contractions of the heart (Mahadevan, 1956).

An intensive post-operative course of streptomycin and P.A.S. will be a wise precaution. In days before the advent of these drugs, a long wait till all the tuberculous lesions became quiescent was considered essential before operation was undertaken. Nowadays, under streptomycin cover, operations are done much earlier and it is found to be quite safe to do so. An increasing number of patients with living tubercle bacilli present, are being safely pioleted through the operations (d'Abreu, 1953). In fact, the constricting effect may become evident even while there is pericardial effusion and operation may be done even at this stage. Perhaps it is wise to do operation so early, as this may cut short an otherwise prolonged course of chronic illness. It would also avoid a long and unnecessary waiting before oparation is undertaken or becomes unmistakably necessary. Thus Holman states that when a diagnosis of tuberculous pericarditis is made, and evidence indicates that it is tuberculous in origin, operation should not be unduly delayed, but should be performed at an early date if cardiac compression can be demonstrated, *regardless of whether it is due to pericardial effusion or to a contracting pericardinm.* He reports five such cases treated by radical pericardiectomy with resulting cure in three and marked and still progressive improvement in the other two. All operated areas healed per primam, despite the presence in the pericardium of active tubercle bacilli (as indicated by positive culture).

The results of operation are very gratifying but the mortality continues to be high still, even in the best of hands (about 10%). This is largely because of tendencies to cardiac irregularities and sudden arrest, particularly during the induction of anaesthesia, and also during the actual operation. During the process of excision, if the heart shows any irregularity it is best to stop and wait, bathing the heart in procaine solution during the interval. In carefully selected cases, a cure by operation may be expected in 50%. Sometimes a recurrence of the signs and symptoms like dyspnoea, and ascites occur. This was in the past attributed to irreversible cirrhosis of the liver, tuberculous peritonitis, myocardial damage and so son, but there is reason to believe that the real cause is insufficient release of the heart. A second more extended operation will bring about a cure in such cases,

CONCLUSION.

More and still more advances are occurring daily. Results of operation even in the follow-up that has necessarily been short, show that there is room for improvement. e.g. recurrence of stenosis after mitral valvulotomy has occurred, though it may be only in 5% of cases (Wood, 1954, Basu, 1955). But these defects will surely be overcome. Surgery of mitral regurgitation, hitherto very unsatisfactory, is promising to come under control. The method suggested by Nichols of passing a mattress suture across the incompetent pole of the valve, seems to be promising (Bailey, 1956). Already, the development of the heart-lung machine and the extra-corporeal circulation which permit one to open the heart and repair the interior under direct vision, have become a reality, though it has not yet been possible to adopt these measures except in very special clinics. Surely these methods will soon come to be adopted more universally. The present methods may then become obsolete, though they will be remembered as brilliant land-marks in the development of cardiac surgery. Already, even large dissecting aneurysms of the aorta have been successfully operated on, as also large aneurysms of the ventricles (Bailey, 1956).

In all what I have written above if I have only referred to the works of others, I may be permitted to state that the object of writing this article is to bring home the point that at least some of these major operations can be performed even in "Cottage Hospitals ". What is required for such an accomplishment is a certain amount of planning, and a good amount of enthusiasm. Another object is to bring home to the student of today, what has already been accomplished and what is possible in the future. If in the light of these, he strives and cures in times to come, even half a dozen patients with mitral stenosis, I will be more than satisfied. He would have enabled these unfortunate invalids, to become once again fit and earn their livelihood without being a burden on others. They regain their self respect and become useful members of society and such an achievement is surely sufficient reward for all the troubles we may have to take.

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PEARLS OF TRUTH

Facts are many, but the truth is one
Men are cruel, but man is kind.

—*Tagore*

None can help you except yourself.

—*Gandhi.*

Faith is a telescope

—*Emerson*

Ask no questions, and you will be told no lies.

Bole Brothers

for

DRUGS
MEDICINES
PHARMACEUTICALS

★

SURGICALS, DENTAL
VETERINARY
INSTRUMENTS

★

SCIENTIFIC AND
LABORATORY EQUIPMENT
MICROSCOPES

★

ELECTRO-MEDICAL
APPARATUSES
ETC

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29 JAN 1958
MADRAS

PSYCHO-SURGERY

by

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★

Our ancients conceived of insanity and epilepsy as Devilish disorders and attempted to cure them by Manthrams. There is proof to say that ancient Surgeons trephined the skull with a view to allow the devils to escape from the interior of the brain. Later in 1856, attempts have been made in cases of Auditory Hallucination to remove portions of the superior temporal gyrus, with doubtful good results. But it was only in 1935, Dr. Egas Moniz started his operation on the frontal lobe by disconnecting it from its Thalamic and other connections under the new concept that most of the mental disorders are frontal in origin.

It has long been discussed whether the brain is the organ of the mind or the mind is the function of the brain. At the moment, there is no doubt in the minds of the Physiologists, that the mental functions are nothing but the sum total activities of the brain cells. Following the law of Julius Woolfe, "Function is dependant on structure," a disordered function of any physiological unit in the human system is undoubtedly the outcome of a diseased or disturbed structure. Abnormal behaviour of a person indicates to abnormal structure and activity of the brain cells. Therefore the only logical method of treatment of psychological disorders is the correction or destruction of the disturbed brain cells. At the moment, our knowledge of the function of the frontal cells are vague and meagre, although it has been proved that symptoms of violence, excitement, combativeness and aggressiveness are situated in the cells of the angular gyrus on the medical surface of the hemisphere, and feeling of suspicion, fear and other emotions are in the cells of the orbital surface of the frontal brain. As knowledge of this branch of science develops, the psycho surgeon will be able to pick out the areas involved and destroy them with minimal damage to the remaining cells; and the existing vague denomination of mentai disorders will change into disorders of areas 10, 11, 12 etc; just as we call the absence of speech, the destruction of the area of Broca. As at present we are unable to identify the exact cells involved, it has become necessory to destroy the afferent and efferent connections of the cells partly or completely without much scientific precision. Division

of these white fibres through a blind opening in the skull is called Leukotomy and through an operation on the vertex is called Lobotomy.

Mental disorders are rare in children and the animal kingdom. These diseases are in a way the price that man pays for the developement of his frontal lobe. Every man behaves differently from the other. As many minds exist as there are faces. The spectrum of normality is fairly wide. In advanced countries like America, one in hundred of the population temporarily get away from the spectrum, returning immediately within the spectrum, so much so they are not considered abnormal. although some might like to call such behaviour funny. But 1 in 1000 of the population is really abnormal, though adjustable in society and requires no special treatment. We have in our State, nearly 3,000 patients almsot permanently confined to the cells, in a population of 3 crores which means that 1 in 10,000 of our men is permanently disabled, useless and dangerous to himself, his relatives and the society in general. This is indeed a vast problem of the State, where I should say, very little attention has been bestowed by the profession and the State. This is perhaps the only disease where the patient is unable to seek relief himself for obvious reasons. The responsibility of the State and the profession therefore has become more paramount in helping these unfortunate individuals from their helpless condition.

In the State Mental institutions to-day, many methods like psycho-analysis, Insulin shock, Electric shock and Hormone therapy are in vogue, giving relief to some of the victims temporarily or permanently ; but those that stay still behind the prison bars ranging from a year to a whole lifetime, inspite of such non-operative methods mentioned above, constitute a serious problem for the State, which today can be successfully tackled to a considerable extent by the application of modern methods of surgery in suitable cases, as is being done in many other countries of the world. These operations are now being done in India in many places, including Madras and Vellore in the South. The results obtained in the Government Stanley Hospital are quite as good as those obtained in the West. Thanks to the authorities of the Mental Hospital in the proper selection of cases, as the good results have been proportional to the proper selection of the patients. From the point of view of psycho-surgery, mental disorders can be classified into two main groups (1) affective disorders (2) those without affect. The former are emotional, excited, talkative, euphoric and active ; while the latter are quiet, not responding, unconcerned with the surroundings and not afraid of even the Atom Bomb. The former react well to the operation ; while the latter do not. Schizophrenias come in the latter group and are not good indications, except in those associated with paronia ; and the paroniac type react well indeed.

In a series of 64 cases operated in the Stanley Hospital, 27 have gone back to work or joined their husbands. Another 26 of them have again left the institution and are found adjustable in society, so that they require no more confinement to cells. If we had a Rehabilitation centre, which is an inevitable adjunct to a psycho-surgery unit, this group could have been made to engage themselves in some form of productive work enriching the State, instead of being a permanent drain on the Government Funds. The remaining 7 were unaltered and therefore considered failures. The mortality has been four which with increasing experience should become a negligible one. There has been no death in Leukotomy operation and mortality cited here relates only to open lobotomy.

The last two decades have witnessed the growth and development of surgery for the correction of mental disorders. The operations were undertaken only in such cases where all other measures have failed. The operative results vary with the nature of the disease.

Disease.		*Results.*
1.	Hypochondrisis	100%
2.	Maniac depressive Insanity	90%
3.	Involutional insanity	70%
4.	Schizophrenia (Paranoid)	50%
5.	Schizophrenia (others)	Poor
6.	Mania with combativeness	Poor

Although the earlier operations were directed mainly to cases of Schizophrenia it is being incresingly felt that they are not the proper Indications except for the paranoid type. Hypochondrias are persons who complain persistently of diseases that do not exist, remaining as permanent drain on and nuisance to the family. They react marvellousely to the operation. Fixed ideas of an emotional type can be cut away with the knife. The classical story of a young lady in America who continuously wept that " she has offended the Holy Ghost " was normal, a minute after cutting under local anaesthesia directly under the nose of an inspecting group of Neurophysicians who first doubted the value of such procedures. The Superintendent of our Mental Hospital in the earlier days was not quite happy over these operations until he found that Mrs. Jayaseelan who was living in the Mental Hospital for 13 years was one day attending the morning Church along with him after the operation. There are a good number of similar results in the city of Madras attending to their normal duties including that of a Police constable.

1. Leukotomy.
2. Lobotomy.
3. Lobectomy.
4. Orbital under-cutting.
5. Anterior cingulectomy etc.

The earlier leukotomy consisted in cutting the frontal brain on either side vertically from the base to the vertex blindly through an opening made in the bone 3.5. c.m. from the outer border of the orbit and 5.5 cm. above the zygoma, with a blunt knife. Where reaction was not satisfactory, an orbital leukotomy was practised through an opening in the roof of the orbit. Later as it was found that during the blind cutting some of the fronto-thaamic fibres escaped, open lobotomy under direct vision through a one-inch opening on either side on the vertex of the skull with coagulation and suction of the white fibres right down to the base of the skull gave more promising results. With increasing experience and knowledge of localisation of particular group of complaints Surgeons in America are under-cutting or removing the grey matter corresponding to the disease only. Recently cases of Mania are also being tackled by an operation called anterior Cingulectomy. Complete removal of the frontal lobes are gradually being given up, as they are bound to produce some personality defects in the individual.

Much has been talked about the personality changes resulting from the operation. In case of the limited operations mentioned above, the changes have been practically nil. Intelligence, memory and judgment are untouched. Reading, writing and calculations are normal. But it is possible that close relatives may note some difference in the individual, not noticeable by others. The driver of a car may notice some changes after the engine is tuned up, which cannot be detected by another driver. Is that a real defect ? And this has to be weighed against an otherwise totally and permanently disturbed personality useless and dangerous to himself and the rest. Thus it would be seen that the prejudice in certain quarters cannot stand a moment's scrutiny. In more extensive operations, it is stated that the shrewdness of the person disappears and he is likely to be duped by the cunning members of the soeiety. We are all afraid of dealings with a very shrewd person and those who are not extra shrewd are considered good men in the society.

The greatest obstacle that lies in the way of popularising this procedure is the fact that the 50% of operated cases where improvement is not good enough to make them fit for earning their livelihood independently have to be adjusted with their near relatives, who are afraid that the responsibility which now rests upon the Government will be transferred to their

shoulders. Therefore they are not particularly anxious to try this new method of of surgical remedy. The way out of it is for the Government to establish a Rehabilitation Centre where the partially successful patients can be turned to useful avocations, which will fetch them their livelihood and the Government their expenses. I have now operated on 64 patients during a period of 7 years on those sent from Mental Hospital, Madras, containing nearly 2,000 in-patients. This is indeed a poor number when considered with the hundreds of operations undertaken in western countries.

I am herein making a sincere attempt to convince you, as I am convinced that this branch of surgery has much better scope of relieving human misery than the treatment of cancer and tuberculosis and that the State and the Society have not yet shown their responsibility towards those unfortunate victims. The mortality and the personality defects are trivial and the percentage suceess in the procedure comparatively high as to call for a change in the attitude of the members of the profession, the society and the State towards the problem of the surgical relief of the permanent psychotics.

In 1940, the physicians characterised this operation as ' Lobotomy delusion is Meddlesome Surgery and a violation of Hippocratic Faith," and later in 1950, "Perhaps deplorable inexcusable and a sign of callousness to remain apathetic, with folded hands, content with learned deliberations upon these psychopathic curiosities who are unable to seek relief themselves, and we being unable to deliver them the goods."

We are thankful to the Superintendent, Mental Hospital, Madras and to the Dean, Stanley Hospital for making this study possible. We are also thankful to the Dean, Stanley Hospital, Madras and to the Director of Medical Services, Madras for permitting us to publish the same.

With best wishes

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SOME ASPECTS
OF
THE SURGICAL ANATOMY
OF
THE LUMBAR INTERVERTEBRAL DISC

Prof. A. ANANTHANARAYANA AYER, B.A., M.B ,B.S., M.SC., F.A.SC.
and
G. R. K. HARI RAO, M.B.,B.S.
Institute of Anatomy, Stanley Medical College, Madras.

Low back pain associated with the herniation of the nucleous pulposus has come to considerable importance recently. The recorded frequency of the condition has also increased. The prolapse of the nucleous pulposus due to ruptured intervertebral disc is commonly seen beyond the age of thirty, though it may occur in children rather rarely.

Without going into any exhaustive review of the literature concerning the problem it would suffice to mention a few workers in the field. Lindblom (1951) mentions that disc protrusion was first described about a century ago by Virchow in 1857 and a year later by Luschka. Hirch and Schajowicz (1953) maintain that the annulus fibrosus is rendered avascular progressively and thereby in the posterior parts of the lumbar discs after thirty years radiating ruptures occur. They take the view that the appearance of a highly vascular granulation tissue within the intervertebral disc constitutes the pathological basis for low back pain. Naylor and Smare (1953) consider that one of the many factors in the production of the disc syndrome is an increase in the water content of the nucleous pulposus. Ferustrom (1956) reports the common incidence of lumbar disc herniation in children from a series of study of clinical subjects, and in the series the youngest patient was fifteen years of age. He contends that presumably degenerative changes of a primary nature also occur in children, the same as in adults and are responsible for herniations Toni and Trivisi (1957) made observations on the relationships existing between the intervertebral foramina, discs and spinal nerve roots.

The normal anatomy of the intervertebral disc and its relations to the neighbouring structures, such as the nerve roots and intervertebral foramina, is given so as to correlate the anatomical factors with the physiological production of 'Low back pain'. Some original observations from unpublished data of work carried on at the Institute of Anatomy are also included.

NORMAL ANATOMY

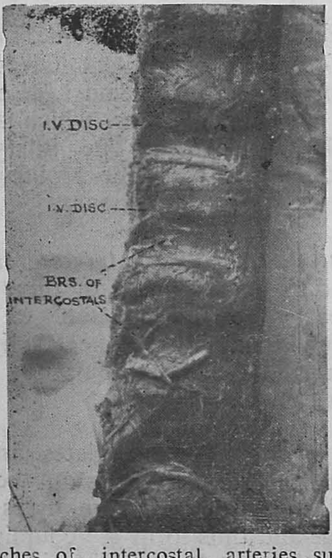
Development.—A sclerotome contributes to the formation of adjacent halves of two neighbouring vertebrae and a disc excluding the nucleous pulposus, which is derived from the notochord. The intervertebral disc is developed from the proliferation of cells at the sclerotomic fissure.

Architecture.—The intervertebral disc is regarded to be composed of three component parts blending together to form a single functional unit: The Hyaline cartilage plates, the nucleous pulposus and the annulus fibrosus.

The hyaline cartilage plates are firmly supported in front and sides on the rim of the ledge of the ring apophyses of the vertebrae and thus form a 'coupling unit' binding the vertebra of one side with the annulus of the disc on the other. The annulus forms the outer zone while the nucleous pulposus the inner core or zone of the intervertebral disc and the cartilage plates clasp it above and below like a drumhead. The annular fibres are poorly protected where the rim-ledge is deficient posteriorly and the posterior longitudinal ligament provides a feeble support to the

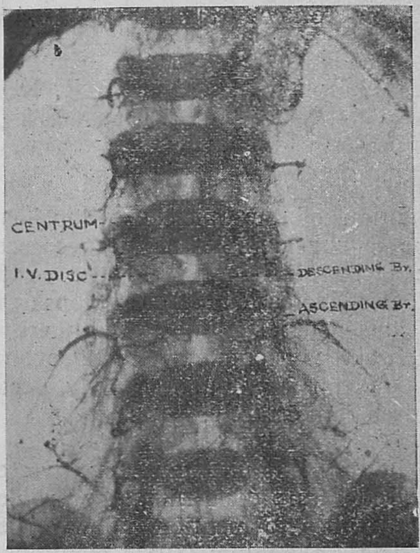
disc, and where the cartilage plates are thinnest. Any increase in the internal pressure of the disc due to the dynamics of movement of the spine, generally tends therefore to squeeze the nucleous pulposus posteriorly and allow the weak posterior annular fibres to stretch and bulge into the spinal canal.

Vascular supply of the discs.—The spinal arteries that enter the spinal canal through the intervertebral foramina, divide into ascendir g and descending branches, which anastomose to form a longitudinal anastomosing net-work deep to and on either side of the posterior longitudinal ligament. The pattern of arterial plexus varies slightly from segment to segment even of the same spine. A longitudinal anastomosis is irregularly formed with four arteries, two from either side, an ascending and a descending, converging towards the centre of the dorsal aspect of the vertebra.

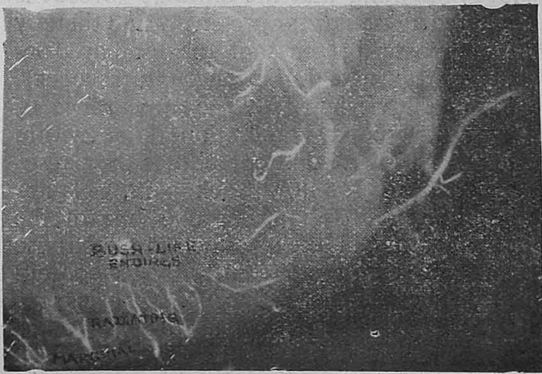


Branches of intercostal arteries supply the anterior and lateral aspects of discs and vertebrae.

A nutrient artery arises from the anastomosis of the ascending and descending branches on each side to supply that half, of the vertebra. Thus two nutrient arteriels enter two foramina, one on either side of the median line on the dorsal aspect of the vertebra. Within the body of the vertebra, they coalesce soon and subsequently divide to form a sinusoidal net work, which sends minute branches up and down reaching the disc. The vascular foramina on the sides and front of the vertebra form the sites of entry for arteries and exit for the veins.



Radiograph of lumbar spine showing ascending and descending branches from special branches of lumbar arteries, converging towards the centrun.



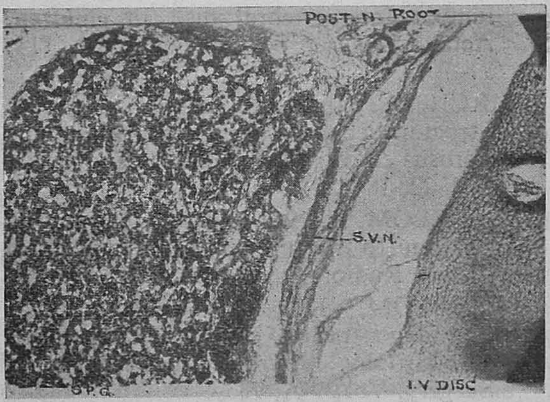
Transparent preparation of intervertebral disc, showing the marginal and radiating arteries and "bush-like" endings in the annulus of the disc.

The discs are richly supplied by arteries that pierce the cartilage plates from above and below, fine branches from the arteries coursing round the bodies of the vertebrae

on the sides and front, and the branches from the dorsal arterial plexus. The pattern of arterial distribution in the disc is similar in all the regions.

The arteries that pierce the circumference of the disc are the ' marginal arteries ', which extend to a short extent into the annulus and terminate along the lamellae like the branches of a tree, and therefore are called ' bush-like endings '. The nucleous pulposus is avascular throughout the prenatal and postnatal stages.

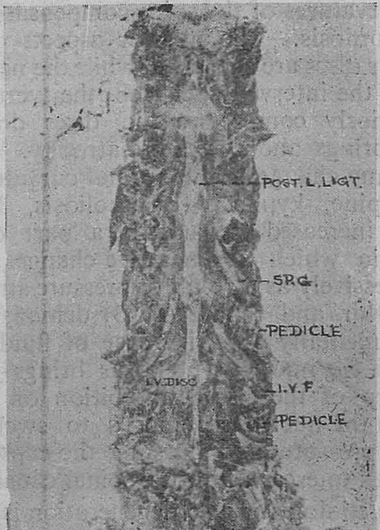
The nucleous pulposus has an inherent property of absorbing fluids from the neighbouring tissues by diffusion and osmosis and thereby maintains its nutrition. The vascular supply to the disc is also partly responsible to maintain the nutrition. When the vascular supply wanes with the advance of age, progressive changes take place in the water-balance of the nucleous pulposus and the structure of the annulus. These are partly responsible for the occurence of radial ruptures.



Origin of sinu-vertebral nerve from posterior nerve root, distal to spinal ganglion in 80 mm. H.E. CAJAL X 80

Nerve supply of the discs.—The recurrent meningeal or sinuvertebral nerve originates from the posterior nerve root at its exit from the intervertebral foramen and just distal to the posterior root ganglion before the nerve roots unite to form the spinal nerve. It gives off ascending, descending and transverse branches which overlap the districts supplied by the segmental branches above and below. A little beyond the median line of the intervertebral disc the nerves from either side enter the posterior longitudinal ligament and supply the ligament and the external lamellae of the disc. Very fine filaments from the sinuvertebral nerve also supply the dura mater. The nerve terminates as free naked nerve endings in the external lamellae of the annulus fibrosus. They are believed to subserve sensations of pain.

Relation of the discs to the nerve roots.—The spinal cord terminates as the conus medullaris at about the level of the first lumbar vertebra. Therefore the lumbar and sacral nerves course together for long distances towards their exit forming the cauda-equina. Especially the lower three lumbar nerves traverse longer distances from their cord origin to exit and therefore come into relation with many inter vertebral discs.



The relationship of spinal ganglia to intervertebral discs and intervertebral foramina (I.V.F.)

Relation of spinal ganglia to intervertebral foramina.—From a series of dissections of lower lumbar region and sections studied it is found that the spinal

ganglia snugly fit into the intervertebral formina. The dimensions of the formina, decrease from the third to fifth, which last is very narrow.

ANATOMICAL PREDISPOSITION TO PATHOGENESIS.

Discs at the low back form the fulcrum between the movable trunk above and the fixed pelvis below. Thereby they are subject to constant stress and strain and wear and tear in everyday life. Particularly the lumbo-sacral junction is a critical region where the downwardly acting forces are resolved in different directions, with tendency for the lumbar spine to slip over the sacrum. Any slight alteration in this delicate balance here upsets the configuration of the discs.

The modern high-heeled shoes add to the incidence of low back pain especially in women. The spine has to adjust to the altered centre of gravity to maintain an equilibrium of the upper segment over the lower fixed segment. In this endeavour, the curvatures of the spine compensate with with lordosis. The anterior aspects of the lumbar discs are stretched, while the narrowing of the intervals between the vertebrae posteriorly compresses the discs dorsally and brings about pressure atrophy. Similarly any change in the normal curvature of the spine, kyphosis or scoliosis, brings about increased pressure on a part of the disc, in which degenerative changes set in progressively as a result of pressure atrophy.

Naylor and Smare (1953) demonstrated experimentally that increase of fluid pressure in the nucleous pulposus brings about rupture of the disc. Imbibition of fluids causes the nucleous pulposus to swell and exert pressure and bursting the capsule of annulus to escape into the spinal canal.

The etiology of disc degeneration is attributed to the defective nutrition to the discs as a result of atrophy of vascular channels and the upset in the normal mechanism of osmosis and/or diffusion as the lamellae of the annulus no longer function as a semi-permeable membrane. The nucleus pulposus itself may also become degenerated as a part of the change. But, the rate at which the degenerative changes occur in the annulus is not comparable to that of the nucleous pulposus. Thus while the nucleous pulposus maintains its turgidity, which acts from within as the driving force a degenerated annulus would rupture. Since the nucleous pulposus is situated nearer to the posterior aspect of the disc where the annulus is usually thinned out and poorly protected it tends to rupture more often at this site.

A hundred intervertebral discs of the lumbar region were sectioned horizontally into thin slices and the incidence of radial ruptures were compared with those of Linblom (1957).

Lindblom (1957)	...	46 per cent.
Present study	...	52 per cent.

The subsequent symptomatology due to prolapsed nucleous pulposus is obvious and determined by the proximity to nerve roots which are sandwiched at the intervertebral foramen.

We do not propose to go into the clinical aspects of the problem.

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Cases of Hydatid Disease

BY

Dr. G. ATMARAMA RAO, M.S.,
Professor of Surgery, Stanley Medical College
&
Surgeon, Govt. Stanley Hospital, Madras.

PART (1)
HYDATID CYST OF THE LUNG

Patient—Mariamma Hindu, female age 10, native of Ongole taluq was admitted on 26—12—1955 with a letter of reference from the Corporation T.B. Clinic, Pulianthope, as a case of Sub-diaphragmatic abscess.

Complaint and duration—Pain in the right side of chest one month.

History of present illness—Started one month ago, as pain in the right side of the chest and fever which lasted for 4 days. Gives history of intermittent attacks of fever off and on. Has cough with slight expectoration of mucoid character. No haemoptysis on admission. Patient's mother noticed a small streak of blood in the sputum on one occasion about a month ago.

The girl was taken to the T.B. Clinic by her mother, because the father died of cough with haemoptysis, suspecting that the girl might be having the same complaint. From the T.B. Clinic, the patient was referred for admission in General Hospital.

Previous illness—History of 'Dysentery' about a month ago for which the patient took native medicines for 10 days. No history of trauma.

Condition on admission—Fairly nourished individual. Not anaemic, tongue moist and clean, no lymph glandular enlargement. Temperature normal.

Respiratory system :— *Inspection*.—Diminished movement of the lower part of the right side of chest. Trachea—in the midline. Apex beat visible in the 5th intercostal space within the left midclavicular line.

Palpation—Confirms inspection. Vocal fremitus diminished over the right base.

Percussion—Dullness over the right base.

Auscultation—Breath sounds not heard over the right base. Diminished vocal resonance, vesicular breath sounds in the rest of the lung fields.

Other systems : Nil particular. Liver just palpable but not tender.

The patient was running a low temperature and was having pain in the right side of the chest and displacement of the liver downwards, with leucocytosis of 11,200 (P69 L21 E10) Rodiological opinion was

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Part II of "Cases of Hydatid Disease" is a reprint from the Feb. '57 issue of the "Indian Journal of Surgery" with the kind permission of one of its authors, Dr. G. Atmarama Rao, M.S.

"Subdiaphragmatic abscess." This was considered unlikely due to absence of a definite history of abdominal pain, suggesting a preceeding perforative lesion and the patient was not toxic, to suggest intra abdominal suppuration. A diagnostic aspiration was carried out in tne theatre under general, on 1—3—1955. The needle was introduced through the 8th interspace (right) in the posterior axillary line and about 8 ccs of clear fluid was aspirated. Fluid contained one or two small (? Hydatid cysts), opaqe bodies of the size of Pea, white in colour. Fluid was sent to the pathology department for evidence of Hydatid Disease.

Report : 1. 1006/55 dated 3—3—'55—Scolices and hooklets of T. Echinococcus seen.

2. 3194/dated 3—3—'55—Total proteins 0.6 gms%.

3. Culture—Sterile.

Casoni's intradermal test was not conclusive, as the area was only 2.5 cm, after ½ hour and there was no material difference in the reaction between the Arm tested and and the contiol.

After aspiration, patient was dyspnoeic for a day. A back rest was given and oxygen through a nasal catheter was administered for about an hour. Coramine 2 cc intramuscularly was given.

8—3—1955—Screening was done by the Radiologist in the presence of the Physician and surgeon—Report : Large pneumothorax right lung with atelectatic lung curving over it Below is a cavity with a fluid level. Right cupola of the diaphragm could not be visualised clearly. Appearance compatible with Hydatid-right lung

The diagnosis of Pulmonary Hydatid having been confirmed, the patient was prepared for a Thoracotomy.

Pre-operative transfusion of 350 cc 'B' group blood was given on 24—3—1955.

Pre-operative Penicillin 5 lacs a day intramuscularly was given for 3 days prior to the Thoracotomy as a prophylactic measure.

Operation : 2—4—'55 (Thoracotomy and Lobectomy) By Dr. G. A. Rao.

Anaesthesia—General with endotracheal, gas oxygen and Trielene with controlled respiration with occlusion of the right main bronchus.

With the patient in the left lateral position a lateral thoracotomy incision along the 8th rib was made, 4″ long. The underlying rib was resected subperiosteally. On removal of the rib, some amount of thickening of parietal pleura was present over what appeared to be the cyst. The chest cavity was opened into by a long incision in the parietal pleura in the line of the 8th rib. It was found that there was a cyst about 6″ in its long axis, occupying the whole of lower lobe of the lung. Adhesions were found in three places only, two over the diaphragm and one to the lateral chest wall. They were not very vascular or tough and were easily removed by applying clamps and cutting through. The cyst which was slightly adherent to the middle lobe, was gently separated by gauze dissection and the whole right lower lobe was removed by applying the clamp at its bronchus. Small amount of oozing was present which was controlled by applying a clamp followed by continuous running stitch with No. (1) silk. The bronchus was closed by two layers of continuous stitch with No. (2) silk. On completion of this, there was no oozing or any escape of air from the closed bronchus. The site of adhesions were swabbed with 10% Formalin. The chest cavity was mopped dry and closed in layers, after draining the pleural cavity with a Malecot's catheter No. 5 which was connected to a water seal. The lung was inflated by the anaesthetist at the end of the operation.

A small amount of Penicillin (5,000 units) was instilled into the pleural cavity, before closure of the wound. Catgut No. (1) was used for closure of the pleura

and intercostal muscles and silk for suturing the skin.

	At the commencement.	*During operation.*	*At the end of operation.*
Pulse	80/minute	140/minute	140/minute
B.P.	90/54	100/60	80/60

2—4—'55—Blood transfusion by open method was given during operation and continued in the post-operative périod (650 c.c.) B. group blood followed with 2 bottles of Glucose 5% in distilled water.

8 P.M.—B.P. had come up 120/80 ; condition fair. Bed x-ray taken—Wet film shows expansion of the lung.

Archromycin 250 mgms intravenous was given in the drip.

From 3—4—'55, to 6—4—'55 with the administration of Broad spectrum antibiotics (Achromycin) no complication was noted.

Achromycin 100 mgms intramuscularly given daily till 11—4—55. Patient making a smooth recovery.

10—4—'55 — Alternate sutures removed. Slight wound infection in the posterior part, at the place where drain was kept. Total Leucocyte count 16,500. P-47 L-44 E-1 M-8 — Wound dressed and strapped.

13—4—'55 — Rest of sutures removed. Wound infection slightly dressed with local application of Penicillin.

25—4—1955—Patient is taking full diet, and is able to walk within the ward. Wound almost healed. Has a slight tendency to scoliosis (Postural) Patient advised to walk with a correct gait, and sit always in an erect posture.

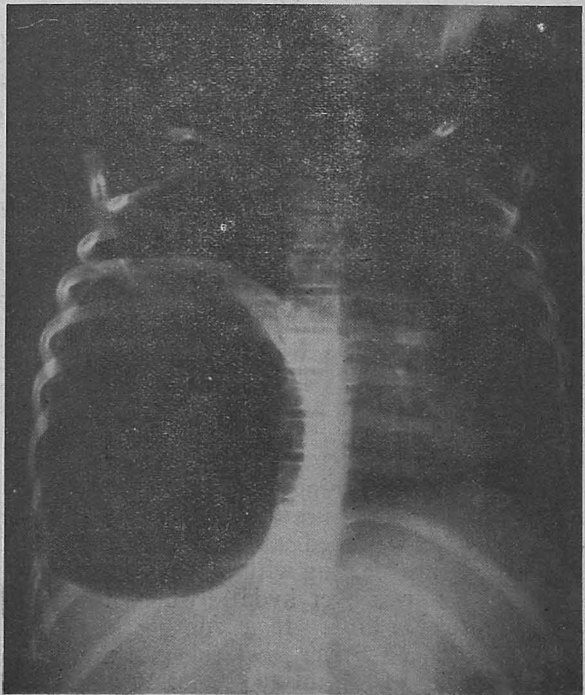
Later, the wound healed completely and the patient was discharged.

Lung completely expanded. No pleural effusion.

Macroscopic appearance—(Specimen) An ovoid cyst measuring 6″×4″ ftlled with clear fluid. The cyst wall was fairly thick and greyish white in appearance. Only a very thin fringe of normal lung tissue is left at the periphery of the cyst.

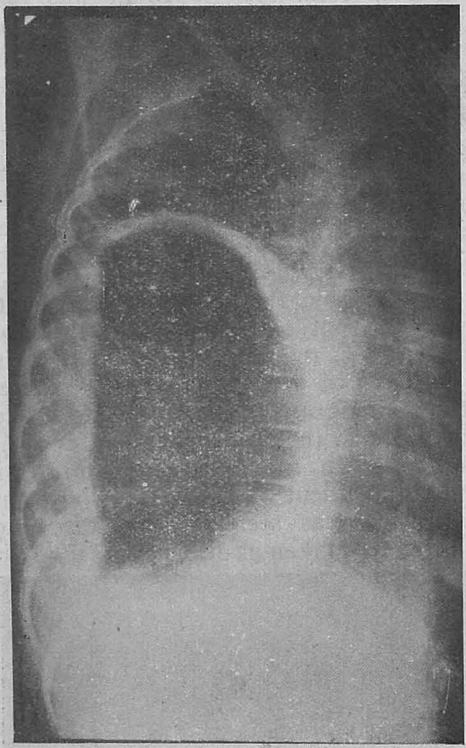
Microscopic appearance—Report No. 1586-88 dated 2—3—1955—Hydatid cyst of lung—Laminated membrane of cyst wall well seen.

Comment (Diagnosis) At the outset, it should be said that a hydatid cyst of the lung was not thought of in this case. The case was referred from the T.B. Clinic as a case of subdiaphragmatic abscess. At the time of admission, there was low grade fever with leucocytosis and pain in the chest. In the original picture, with which the patient was referred, a horizontal fluid level was seen below the diaphragm and this was taken as evidence of subdiaph-



Hydatid rt. lung. (A.P.View.)
Upper limit of the cyst, well seen.

ragmatic abscess. Actually what was taken as the diaphragm, represented the upper limit of the cyst and the horizontal fluid level, represented the level of the fluid in the cyst.



Hydatid rt.lung (oblaque view.)

At the time when aspiration was performed, the possibility of a hydatid was not kept in mind. Fortunately, the aspirated fluid gave evidence of a hydatid infection and hooklets were demonstrated in the aspirated fluid. The patient suffered from a little dyspnoea after aspiration and this subsided in a day.

Subsequent screening and pictures revealed the true nature of the condition. A doubt was expressed at this juncture, whether we are dealing with a Hydatid of the right base or a liver hydatid which has ruptered into the lung. If a rupture had taken place of a Liver hydatid into the lung as a result of aspiration, certainty one would expect a very serious anaphylactic reaction and respiratory distress. This was not the case in thc case under discussion. It was agreed after repeated examination that we are dealing with a hydatid cyst of the lung. A procedure which has been suggested to differentiate radiologically between a pulmonary hydatid at the base of the lung and liver hydatid, is to induce a pneumoperitoneum and then take pictures. This procedure was not done in this case.

Casoni's test is said to give positive results to 70-80 per cent of cases. In this case, the test was not conclusive. There was an eosinophilia of 10%. But eosinophilia is not diagnostic by itself.

Hydatid cyst usually causes a slightly ovoid shadow of uniform density in the uncomplicated cases. Perivesicular pneumo

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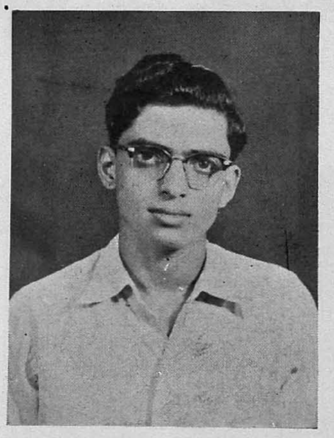

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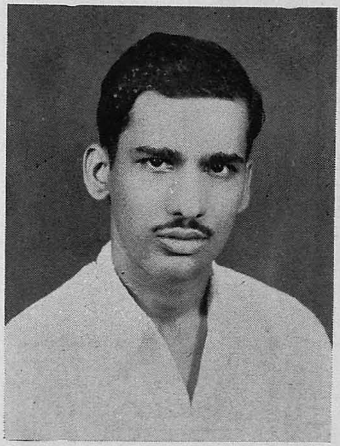

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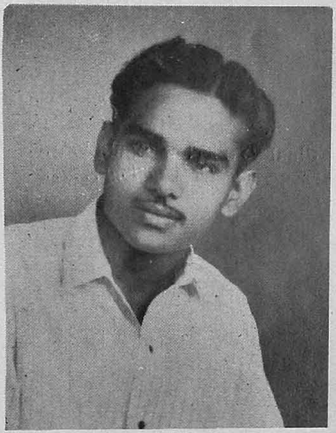

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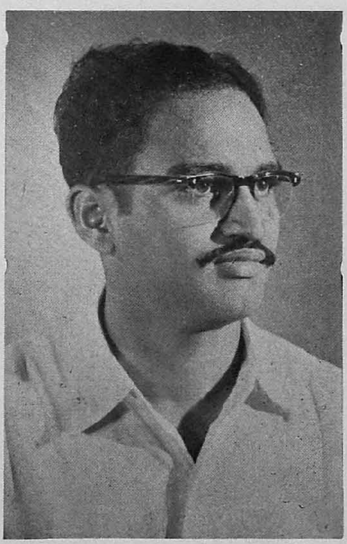

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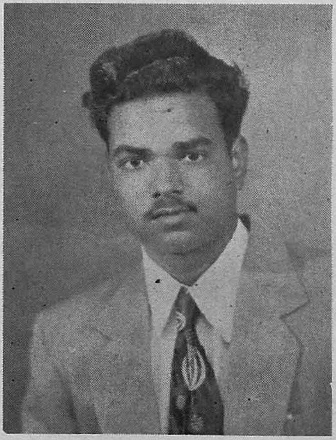

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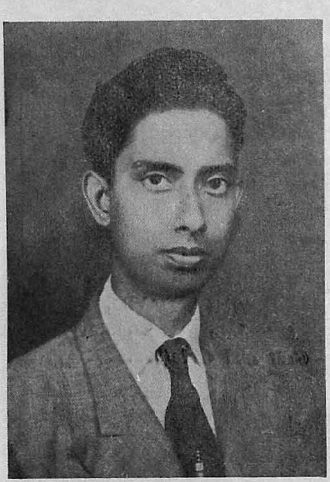

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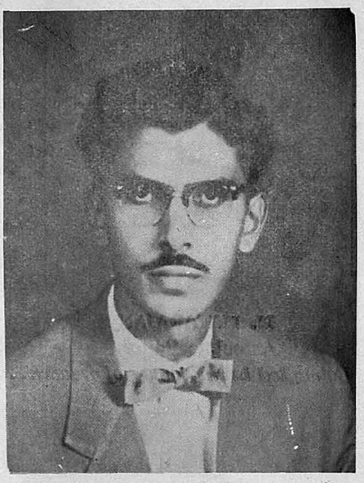

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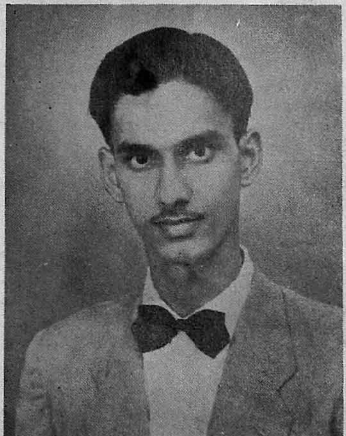

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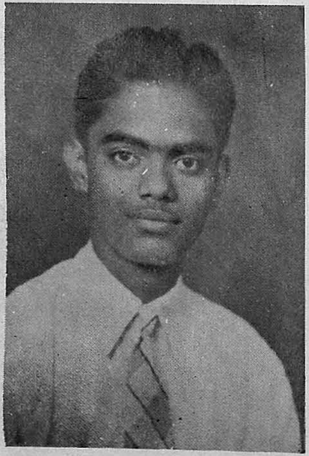
Serve all, suffer little....

NEELAVATHY ARTHUR,
Pre-clinical Rep. for women.
Familiarity must be endured—not enjoyed......



CT. ALAGAPPAN,
1st. Year.
Sheep in Sheep's clothing....

cyst and the water lilly sign due to the detachment and floating of the germinal layer in a collection of fluid, may be noticed in the skiagram. These are some of the radiological features of a Hydatid cyst of the Lung.

Bronchoscopy and Bronchogram are other procedures, which might help to exclude other conditions and they are of help to reveal any associated lung pathology like Bronchiectasis.

Examination of the sputum for hooklets, if present confirms the diagnosis.

Differential diagnosis—Other cystic conditions in the lung that may come in the differential diagnosis, are Dermoid cysts, cysts of Bronchogenic origin, Enterogenous cyst, Spring water cyst and Pericardial cysts.

Clinical features—Most of the pulmonary Hydatids are asymptomatic for a long time and many of them are detected during routine radiological examination. Many patients come for thoracic pain, haemoptysis and dyspnoea or cough.

A few cases are on record. where such cases have been spotted in the Tuberculosis clinics, where patients had gone because they had haemoptysis. The present case is one such instance.

Types—Pulmonary Hydatids may be classified as :

1. simple

2. complicated—Cysts associated with complications like infection, suppuration rupture, and associated with pulmonary changes like Bronchiectasis, Complicated cysts have usually a bronchial or a pleural communication.

Choice of procedures depends on the size of the cyst, single or multiple, site of the cyst, hilar or peripheral and existence of complications like supppuration haemorrhage and broncho pulmonary lesion. The various procedures advocated are :

(1) Pneumocystostomy (2) Marsupialisation (3) Resection of the cyst with the adventitial membrane (4) Lobectomy (5) Pneumonectomy.

The extent of surgery is dependent on the extent of pathology and the aim is to eradicate the disease, with conservation of healthy, functioning lung tissue. Since the condition is essentially benign, the object is to sacrifice as little of the healthy lung consistent with total extirpation of the disease.

In the particular case under discussion, lobectomy was the only procedure of choice, since the cyst was fairly large and only a small fringe of atropic lung tissue was left surrounding the cyst. No purpose would be served by a conservative procedure and hence a right lower lobe lobectomy was performed.

The patient made an uneventful post operative recovery and did extremely well. The remaining lobes of the right lung had expanded and taken up the entire pleural space. There was no collapse of the lung or pleural effusion. Except for a mild degree of wound infection, there was no other major complication, which caused anxiety or set back in the progress of the patient. The patient though a child of ten, co-operated extremely well and carried out the breathing exercises.

Incidence of Lung Hydatids varies in different countries and is the next common site after the Liver. Cases have been recorded of simultaneous hydatids of the lung and the liver.

PART II

HYDATID CYST OF THE SPLEEN

BY

DR. A. R. RAO AND DR. V. BALASUBRAMANIAN

Practically no organ in the human body is free from infestation with Taenia Echinococcus.

Since the gastrointestinal system is the portal of entry, the liver is the commonest organ to be involved. Next in order comes the lung since it is the next filter. The involvement of other organs is determined by chance and by the vascularity of the organ.

Among the unusual situations are to be mentioned the thyroid, the spleen, the breast, etc.,

Mahadevan and Menon recorded ten cases of hydatid cysts for the years 1923-32. Reddi and Anguli (1953) reported 33 cases of hydatid disease from the General Hospital, Madras, during the years 1932-52. In both these, hydatid cyst of the spleen is not recorded. Dew (1928) records an incidence of 2·1% as far as hydatid of the spleen is concerned.

Pathology of Hydatid cyst of the Spleen:—Hydatid cysts of the spleen (as elsewhere) can be primary (i.e. where the hexacanth embryo gets implanted only in the Spleen), or secondary, where a primary cyst in another organ ruptures and and the liberated scolices land in the spleen and grow there. In such cases many small cysts may be found in the spleen. This is what Dew calls (1928) secondary echinococcosis.

A primary univesicular Splenic hydatid (with its brood capsules) usually remains in that state for a long time without giving rise to daughter cysts. This is so since the cyst is protected from trauma because of its deep situation. But due to trauma or some other cause, daughter cysts may form in some cases.

Various authors have classified Splenic hydatids into different groups depending on their location and subsequent extension. Thus Dew (1928) quotes Dieulafoy who classified hydatid cysts of the Spleen into central, cortical and juxta-splenic. Clinically they were classified into ascending or thoraco-abdominal type and the descending abdomial type.

Some Authors have classified these on the basis of ' Presentation ' of the cyst as in the case of pseudo-cysts of the pancreas.

Such classifications are perhaps superflous since whatever the initial location of the cyst the final picture is one of a large cyst. Thus a central cyst may enlarge to such an extent as to resemble a cortical cyst and vice versa.

Course—A splenic hydatid cyst usually grows to a big size before it gives rise to symptoms. This is obvious because a small cyst in the spleen is not likely to produce any sort of disturbance and so will be allowed to grow to a big size. This is the reason why splenic hydatid is rare in children. Even a big uncomplicated cyst produces only vague sypstoms, unless the patient comes for a swelling in the abdomen., A big cyst is perhaps more prone to complications like rupture etc.

Preoperative diagnosis of hydatid cyst of the spleen can only be considered as a possibility when a patient comes with a cystic swelling in connection with the spleen. In the routine investigation of a splenic cyst, the presence of hydatid disease in another organ may be helpful ; or a Casoni's test will have to be depended upon. When the patient comes for a solid enlargement of the spleen (e.g. due to an expanding central cyst) the diagnosis is very difficult, particularly so in a country

like ours where other causes of splenic enlargement are so common, e.g. malaria.

The first case is of interest in that diagnosis was made before laparotomy, during routine investigation. The second case presented many difficulties in diagnosis. Hydatid cyst was also thought of as a possibility.

CASE REPORTS

Case—1 ;

Mrs. S., a female aged 35 years was admitted on the medical side for enlargement of the spleen. Apart from a gradually increasing swelling of two years' duration she had no other complaint. There was no history of fever.

Examination revealed a smooth solid enlargement of the spleen almost upto the umbilicus. Since the routine haematological and other investigations were negative, a splenic puncture, was decided upon. During splenic puncture, clear colourless liquid was aspirated. This was examined microscopically and found to contain hooklets.

Thus a diagnosis of hydatid disease of spleen was made.

A plain skiagram of the abdomen did not reveal any calcification.

Following aspiration, the patient had a slight rise of temperature for a few days. The swelling of the spleen had now become solid in some places and cystic in some places.

She was transferred to the surgical side for further treatment.

The treatment contemplated was splenectomy and accordingly under general endotracheal anaesthseia the abdomen was opened by a left paramedian incision. The diagnosis was confirmed. The cyst was aspirated after suitably packing the area ; 10% formalin was injected ; the cyst came off very easily, with suction. There were no daughter cysts. Splenectomy was then performed along the usual lines.

Her post operative course was uneventful.

Case 2.

Mrs. K. aged 55 years, a labourer was admitted on 30—7—1955 for a lump in the abdomen, of more than 2 years duration. On interrogation the following history was obtained.

The patient was keeping very good health till about 3 years ago. The complaint started as occasional attacks of pain in the left hypochondrium ; it had no relation to food, and used to disappear after a while on fomentation. It used to come roughly once in 10 days.

About two years ago, she noticed a gradually increasing swelling in the left hypochondrium. For the last 10 months patient felt uncomfortable after food and a little breathless on extension of spine. Patient did not suffer from attacks of fever or pain in the back.

Her micturition and defaecation had been normal. She noticed slight deterioration in general health.

There was an obvious fullness in the upper abdomen involving the left hypochondrium, left lumbar, upper half of the umbilical region and the whole of the left loin. By palpation the extent of the tumour was made out as occupying the above mentioned regions. Its borders (except the upper) were firm. Except at the periphery the tumour felt soft and cystic. Ballotment was possible. A vague notch was felt on the lower margin of the tumour. The tumour was very freely moving with respiration and was not tender. Fingers could not be insinuated between the tumour and costal margin. The liver was not palpable and there were no other palpable lumps in the abdomen. The tumour was dull on percussion all over. Hydatid thrill was not elicited. There was no free fluid in the abdomen. The tumour did not fall forward in the knee elbow position.

The cardiovascular system and respiratory system were clinically normal.

Provisional clinical diagnosis:

The diagnosis was between a splenic cyst and hydronephrosis.

Among the cysts of the spleen, hydatid cyst was thought of, in spite of the rarity of the condition. Hydatid thrill was not elicited.

Investigations ;

The following investigations were done to arrive at diagnosis.

1. Urine-Normal in colour. No albumin or sugar ; no deposits.

2. Hb-50%.

3. B.P.—130/88mm. Hg.

4. Urine output in 24 hours-930 c.c.

5. Total W.B.C. | 6400/cmm. ;
D.C.—P-60, L 34, E 34, E 4, N 2.

No malarial parasites.

E.S.R. :

At the end of 15 minutes—8mm.

At the end of 45 minutes—33mm.

Plain skiagram of abdomen :—Soft tissue shadow of the tumour seen—no calcification. Barium meal series showed that the stomach was pushed to the right of the vertebral column and it occupied an antero-posterior position. The small intestines were pushed down. Barium enema with screening showed that the splenic flexure was pushed down. Barium filled the colon freely and the colon emptied normally. Intravenous urography showed that the right kidney functions well. No excretion of dye by the left kidney. Casoni's test was not done because antigen was not available.

Exploration was decided on and the patient was prepared for surgery.

Operation Notes :

The abdomen was opened by a left paramedian incision from the costal margin to 2″ below the umbilicus and the rectus muscle was split in the direction of its fibres. As soon as the peritoneum was opened the tumour which was from the spleen was found to occupy the entire wound. Splenectomy was decided on. Mobilisation of the spleen was attempted and it was difficult because the exposure was inadequate. Another incision had to be made transversely starting from the middle of the vertical incision towards the loin. The muscles were cut across. The wound was carefully packed with pads all round.

There were 3 large whitish areas on the surface of the spleen and these areas were cystic. There were adhesions between the greater omentum and the spleen on the medial side and there was profuse haemorrhage during the separation. This was controlled. After separation of these adhesions the organ was gently lifted up a little and the splenic pedicle was secured between clamps, divided and ligatured. The spleen was then almost completely free from any attachments and it was delivered out of the wound. When the last adhesions were severed from the lower pole of the spleen there was an inadvertent puncture into the cyst and a little fluid and also 2 cysts escaped out. But by this time, the entire spleen was outside the wound. It was found that the kidney had been pressed upon by this huge spleen. The kidney was flat and appeared smaller than normal. When the viscera were inspected, there were a few very small white plaques on the serous surface of the pelvic colon. Two of them were excised for pathological examination.

Macrospic Appearance of the Specimen :

The spleen was 8½″ in length and 8″ in breadth.

There were areas of whitish discolouration on the surfaces. The upper third of the spleen was not involved and was

normal. The central portion of the tumour was cystic—the periphery firm. The splenic notch was not distinctly seen.

A small window was cut in the specimen and a number of daughter cysts were seen. The weight of the specimen was 7 lbs. The cyst fluid was examined under the microscope and scolices were seen.

Histopathological Report on the Spleen with cyst :

"There is an increase in the fibrous tissue of trabeculae with congestion of pulp. Lymphoid follicles are atrophic." The wall of the cyst consists of laminated fibrous tissue with collection of Lymphocytes and areas of haemorrhage. The laminated wall is lined by a layer of foreign body giant cells. Hydatid Cyst."

Plaques on colon—4124/55—Wall of hydatid cyst,

Post—operative Intravenous urography :

13—9—1955—Both kidneys were functioning. The pelvis and calyces on the left side were smaller than on the right side.

DISCUSSION.

In the first case diagnosis of splenic hydatid disease was made in the medical wards.

After the aspiration the solid enlargement of the spleen had become cystic practically all over—probably because the hydatid fluid had seeped through the puncture hole and had collected under the capsule of the spleen.

In the second case the history of complaint did not give any clue to the site of lesion. The clinical findings were not typical of either a splenic or a kidney tumour. The hydatid thrill was not elicited in this case. The laboratory tests of kidney function pointed to a kidney lesion. The minute volume of urine was only 0.4 c.c., blood urea was a little raised, viz., 45 mgm% and the standard clearance was only 56.45%. The barium meal pictures did not help much to locate the site of lesion. The stomach was pushed to the right. The barium enema pictures and screening also were not of much help. They showed only the splenic flexure displaced downwards. The intravenous urography did not show excretion from the left kidney. This was very much in favour of a left kidney lesion. It is extremely unusual for an intraperitoneal organ like the spleen to cause compression on the kidney to an extent to cause complete nonfunction. Even in enormous enlargements of the spleen as in Banti's syndrome, intravenous urography always shows good function of the left kidney. A thoraco-abdominal approach to the tumour was originally contemplated in the second case because of the large size of the tumour and also because either a kidney or a splenic tumour could be confortably dealt with. It was not used because in the event of spill from the cyst, both the pleural and peritoneal cavities were likely to be contaminated. There was an unfortunate incident during operation. When the spleen was almost entirely out of the abdomen, there was an inadvertent puncture of the cyst. Prognosis should be guarded in this case because of the fact that the plaques on the pelvic colon showed wall of hydatid cyst. There must have been a rupture of the cyst already.

Hydatid cysts of the spleen must always be treated, because of the danger of rupture by trauma or spontaneously, resulting in massive haemorrhage and/or further spread and involement of the peritoneum.

Conservative operative treatment like excision of the cyst alone is recommended by some ; splenectomy is recommended only when the spleen is completely destroyed, or where there are multiple cysts, or when there is a complication like rupture.

It must be admitted that excision of the cyst alone is safer where splenectomy is likely to be very difficult because of dense and extremely vascular adhesions.

Except under such circumstances, splenectomy appears to be better at least from the view point of total eradication of the disease. This is particularly so since removal of the spleen has no unpleasant sequelae.

Hence splenectomy was performed in these cases.

SUMMARY.

Two cases of hydatid cysts of the spleen are described along with some details regarding pathology of such cysts in general. These are the first two recorded cases in the Madras General Hospital.

ACKNOWLEDGEMENT.

We are thankful to the Dean, Government General Hospital, Madras, for permission to publish these case reports. One of the authors (V.B.) wishes to thank his chief Dr. C. P. Viswanatha Menon, M.S., F.R.C.S. for permission to record this case.

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A Case of Lipo Sarcoma

BY

Dr. M. R. NATARAJAN, M.D.,
Reader in Pathology, Stanley Medical College, Madras.

Introduction :

Justification for presenting this case is the rarity of this fat forming malignant tumour as compared with its benign couterpart, the lipoma and tumours in general and the peculiar gross and microscopic features construed by many to throw light on the possible histogenesis of these tumours as well as the normal adipose tissue itself.

The histogenesis of fat forming tumours is as intricate and ill understood as the histogenisis of normal adipose tissue ; but the two problems are closely bound. Steering clear of all undue controversy it could be said that there are two possible sources of adipose tissue—viz. (1) the ordinary connective tissue derived from the fibroblast which has taken up the function of fat storage and, (2) the specialised cell, a lipoblast derived from the primitive embryonal perivascular mesenchyme. The ultimate origin of both lipoblast and fibroblast being the primitive mesenchyme, which is the precursor of tissues of mesoblastic origin like lymphoid, reticulo endothelial system etc., the origin of adipose tissue tumours presents the same theoretical possibilities with the added questions of whether the tumours could arise from adult fat cells as seen in adipose tissue, or only from embryonic analogues of sequestrated lipoblasts, and secondly whether a benign lipoma has the potentiality to become malignant or a liposarcoma is cancerous even at the very inception. The consensus of opinion at present is that in the majority it is a sarcoma ab initio. If the neoplastic growth of the lipoblast takes an orderly and disciplined course the result is a lipoma, with its fat cells developing into fat cells more closely resembling the signet ring forms of normal adult fat cells. If the trend is towards anarchy the cells retrace their evolution to their mesenchymal origin with the extreme anaplasia bordering on metaplasia in producing other tissue derivatives of the primitive mesenchyme.

Clinical Notes :

Muslim, Male, aged 55 years., with a swelling in the perineum of 6 months' duration, rapidly growing since 1 month—No pain or tenderness—No difficulty in micturition or defaecation—No detectable metastasis.

Gross features:

A kidney shaped lobulated firm tumour the lobules being encircled by pearl-gray bands of fibrous tissue. The lobules are pinkish grey with spots of yellow.

Size : about 10 cm × 8 cm × 5 cm.

Wt : 178 g.

Cut section shows the same fibrous intersection with lobules of creamy and pinkish—grey friable tissue showing spots of lemon yellow fat, and a few spots of haemorrhage. The whole sectional surface was slimy with mucoid material.

Microscopic features :

Varied pictures in different places:

1. Sheets of poly gonal foamy cells with central nuclie interposed with similar cells but more solid staining showing hyperchromatism, bizarre shape and size, some with giant nuclei and some multinucleated mitotic figures in plenty. The cytoplasm of many of these were positive for fat stain (Sudan. iii.)

2. Areas of spindle shaped cells resembling fibroblasts of cellular fibroma or fibrosarcoma. The resemblance to the latter still further accentuated by hyperchromatic irregular nuclei, giant cells and numerous mitotic figures, or round lymphoid cells giving the picture of mixed cell sarcoma. Some of these cells showed fat globules.

3. Certain areas show stellate cells with mucoid material in the interspaces giving the myxoid appearance (myxoma like),

Stout and others consider this varied histological pattern as the expression of various degrees of de-differentiation of the lipoblast producing tissue resembling those of mesenchymal origin. Based on this conception they have graded liposarcoma into four groups.

1. Well differentiated myxoid type which is the least malignant with less tendency for metastasizing.

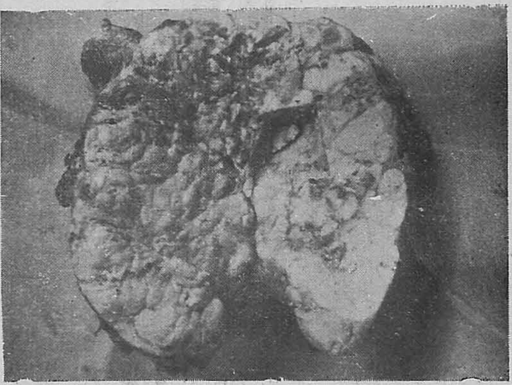
2. Poorly differentiated myxoid type.

3. Round cell or adenoid type.

4. Mixed group showing all the features of the above three. The last three being difinitely malignant with tendency for metastasizing.

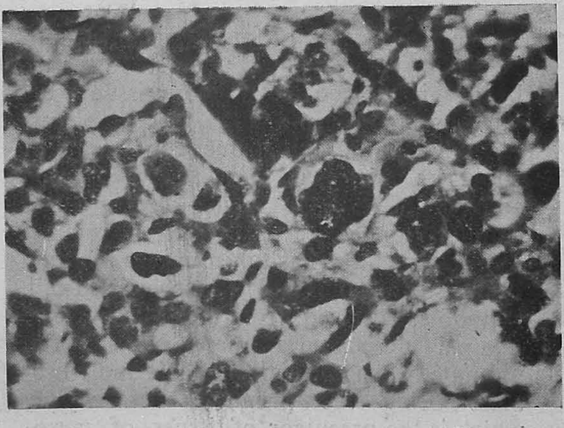
The present case fits in the last group with its varied gross and microscopic pictures.

Shaw still further considers that certain of the sarcomas which were diagnosed as fiibrosarcomas and mixed cell sarcomas were really liposarcomas of extreme degrees and anaplasia.



Gross appearance

Fig. 1 :
Lobulated growth with the appearance of kidney showing marked lobulation.



Microscopic appearance :

Fig. 2 :
Magnification × 60. An area showing sheets of polygonal vacuolated cells with centrally placed hyperchromatic nuclei. Shape and size of these varied There are a few uninucleated and multinucleated giant cells in the field. The vacuoles in the

cytoplasm stained with fat stain (sudan iii) in frozen sections.

Differential Diagnosis : Because of the gross and varied histological picture it could be mistaken for

1. Myxoma.

2. Chordoma.

8. Anaplastic carcinoma or mucoid carcinoma.

4. Fibro sarcoma or mixed cell sarcoma.

Relevant stasistical facts from literatures :

Incidence : In our own material for the past nearly seven years from 1951—to date.

Total No. of new Growths	*Lipoma*	*Liposarcoma*
Pathology Lab of. S.M.C. 2,413	59	1 (definitely diagnosed) ? 1 (not confirmed by fat stains).
Figure of other authors :		
1. Morland and Mc Namara. 16000	?	9
2. Presbyterian Hospital pathology lab. ?	1456	21

II Sex incidence : Lipoma is more in women and liposarcoma slightly more in men.

III. Age incidence ; Majority of above forty years, with mean age 53 years.

IV. Size : Generally laıge between 25 lbs to 179 lbs.

V. Site of predilection : (Figures from Columbia University):

In a series of 43 tumours, majority in the lower limbs (thigh, popliteal fossa and gluteal region)–150(35%). Retro peritoneal and omental and peri-renal zones–70 (16%).

Comments: The peculiarity of the present case is its unusual site of origin from the subcutaneous adipose tissue of the perineal region. There is no mention in the literature of this site. Liposaromas are said to have a special predilection for lower extremities, perirenal and retroperitioneal regions and that they arise from the inter muscular zones but not from subcutaneous fat which is a never favoured site for lipomas. Except for the extremely small size and weight of the tumour, in all other respects, gross as well as microscopic, it fits in well with the type description given by various authors.

Ref :

(1) A. P. Stout.

(2) Shaw.

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—*Oscar Wilde.*

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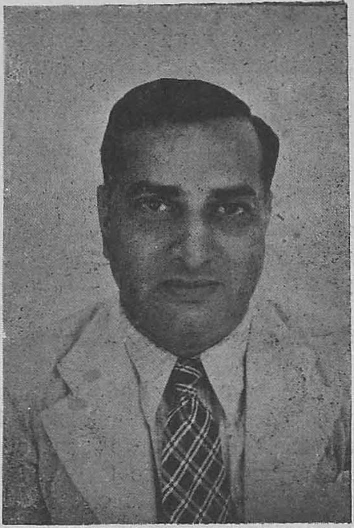
Pharmacological Aspects of Surgery



BY

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★

The relationship between pharmacologist and surgeon is so close and intimate that the two are no more separable than the two faces of the same coin.

Pharmacologist is asked to provide suitable drugs as contrast media for diagnosis of diseases pertaining to gall-bladder, kidneys, lungs, before the surgeon undertakes an operation. After the diagnosis is made, pre-anaesthetic and anaesthetic medicaments have to be provided for the surgeon to conduct his operations with the least amount of pain and discomfort to his patient. Post operative complications such as shock, anuria, sepsis have to be suitably attended to by providing appropriate plasma expanders, pain relievers, and antibiotics. Sometimes drugs have to be provided to make the patient better fitted to stand the stress and strain of operation. One of the outstanding contributions of the pharmacologist is in the field of antithyroid drugs which are used for the pre-operative preparation of the thyrotoxic patient. It is thereby possible to bring almost 100 percent of patients to surgery in a euthyroid state; as a result the operative mortality for single stage operation in expert hands has been reduced from 70 per cent to almost zero. Drugs like morphine, meperidine, atropine are used as a routine procedure before general anaesthesia. The specific objectives of the pre-anaesthetic medication are to lessen apprehension and resistance to anaesthesia, to diminish untoward effects, and to counteract certain undesirable responses such as respiratory and cardiac irregularities and excessive flow of mucus or saliva. In other words all pre-anaesthetic medication routines are designed to make anaesthesia more safe and comfortable for the patient and more efficient for the surgeon.

In ancient times before the advent of anaesthesia, the Assyrians asphyxiated children by strangulation before circumcision, a practice used in Italy as late as the seventeenth century. It has been reported that some surgeons used to produce cerebral concussion by striking a wooden bowl placed on the head before undertaking operations. Naturally operations were horrible ordeals and the surgeon attempted to shorten the agony by working with great haste. Obviously, careful surgery and delicate treatment of tissues were impossible.

The use of anaesthetics for complete and safe abolition of pain in surgical operations is an accomplishment worthy of mention. A new era opened on the operating surgeon, who could have imagined that drawing a knife over the delicate skin of the face might produce a sensation of unmixed delight, that the contorting of an ankylosed joint should coexist with a celestial vision. The fiercest enemy of man—the pain and suffering have been steeped in the waters of

forgetfullness and the deepest furrow in the knotted brow of agony has been smoothed forever. Better and less harmful anaesthetics have been developed and research is going on unabated for the discovery of an ideal anaesthetic. The reputation of the surgeon directly depends upon the careful and cautious anaesthetist who in turn has to be eternally indebted to the pharmacologist for having provided him with the least harmful and most efficient anaesthetic agents.

The advantages of the use of local anaesthetics along with muscle relaxants which are mostly products of synthetic chemist and pharmacologist are too well known to the readers and as such need no special mention.

The use of many chemotherapeutic drugs and broad spectrum antibiotics have revolutionised the treatment in the modern times. Ruptured appendix, peritonitis due to gangrenous condition of the bowels which were beyond all hopes of recovery have responded marveleously to one or other of these wonderful drugs. They are found invaluable in saving lives either in single or mixed infections. Their wide antimicrobial range, excellent penetrability into peritoneal exudates make them extremely useful in the armamentorium of a surgeon.

In the pre-operative prophylaxis of a series of patients undergoing major surgical or gynaecological operations, the antibiotics have proved invaluable and life saving. The incidence of post-operative complications are reduced to a minimum and the surgeon can relax free from worry and anxiety of infection after a major operation. Cellulitis, carbuncles, gas gangrene, furunculosis and a variety of abscesses all respond rapidly and dramatically to antibiotic therapy. Postoperative mortality has been appreciably lowered by the use of one or other of these antibiotics which have taken away the sting of operation considerably.

The importance of plasma proteins for the maintenance of circulating blood volume has been accepted. When blood volume is reduced as a result of haemorrhage or severe traumatic injury which results in the loss of the functioning blood cells, it is generally agreed that the transfusion of whole blood represents ideal replacement therapy for which there is no substitute. However in meeting such an emergency as blood loss with attending shock frequently there is insufficient time for obtaining compatible whole blood. Therefore in the event of disaster it will be necessary in the treatment of shock and post-operative treatment of patients who have undergone major gastrointestinal surgery, to place major reliance on the restoration of the circulating fluid volume at the sacrifice of cell volume. This can be achieved by plasma expanders like plasma, dextran, gelatin, and polyvinyl-pyrrolidone.

Canclusion:

The art of treatment to a patient represents the merger of two independent bodies of knowledge. In their development pharmacotherapeutics and surgery, the two disciplines have followed separate lines at times so far apart that little relationship between them is discernible. But a close study of the two reveals their intimate association and interdependant existence. The surgeon stands in need of quite a number of pharmacotherapeutic agents in the treatment of patients, if he has to adopt what is termed a rational therapy. The use of many of these life saving drugs have taken away, to a considerable extent, the fear, anxiety, complications and mortality necessarily associated with major surgical operations. Hence a close understanding between the two disciplines is a necessity for providing an era of safe surgery, a boon to the patients, nay the whole humanity.

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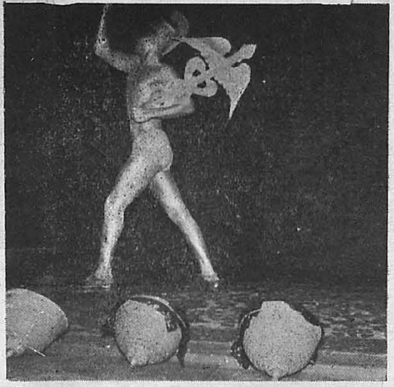
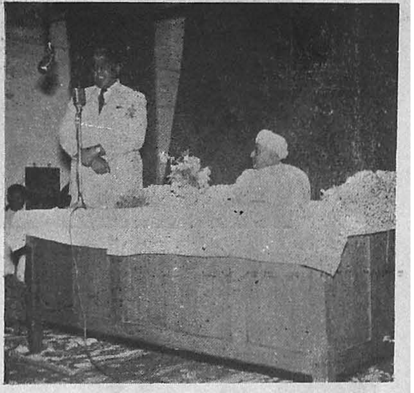
GRADUATES' RECEPTION DAY

Dr. C. P. Ramaswamy Aiyar.
Iron hands in velvet gloves.



Mercury—P. Annamalai.
When chances threaten and souls weaken, descend Mercury on the wings of dove.



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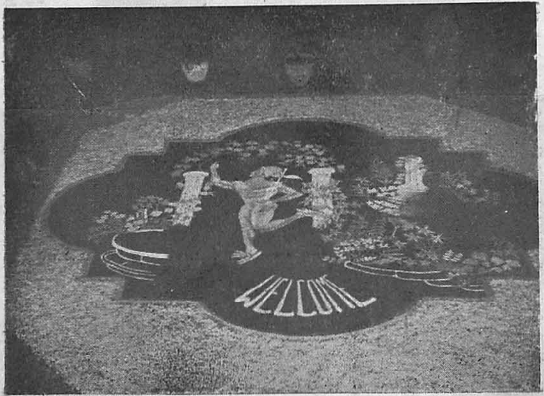
The wire puller thanks his puppets.

Stanley Presents Sivaratnam.
Bud in bloom.

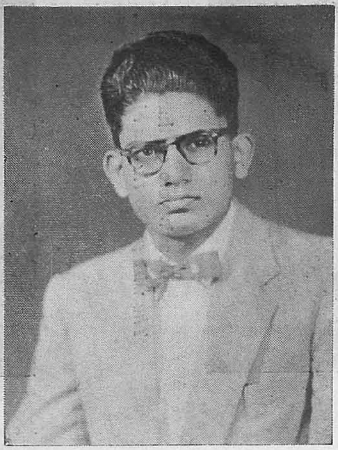


Floral Carpet.
Abandon all cares, ye who enter....

Dance by K. Saroja.
Art of Nature in artificial gestures.

MERITS & CREDITS

G. DURAIRAJ—Volley ball and Athletics
University Blue
Master of all trades........

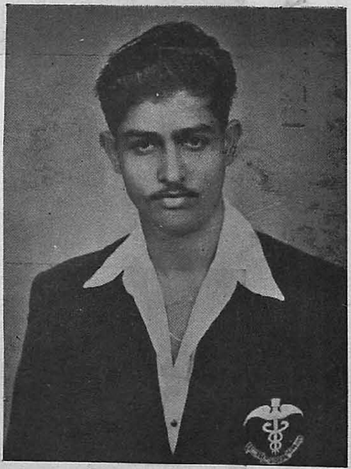


D. GASPAR,
Best out-going student
Unfailing all rounder........

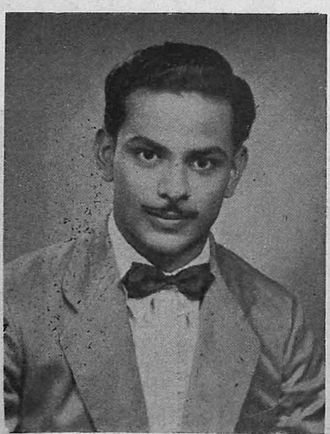
C. RAMADAS KAMATH
Participant, Republic Day Celebrations at Delhi
All for the dynamic neutrality....

T. R. RAJENDRAN—Basket ball
State & University Blue
Sputnik Rocket...........

N. M. ABDUL JABBAR—Volley ball
University Blue
the pseudo-toughy........



G. SWAMINATHAN—Cricket
University Blue & State Junior
Sixers with sex - appeal....



T. V. RAMAMURTHY—Cricket
University Blue

Emergency Tracheotomy

BY

Dr. T. NANDAGOPAL, MB.,MS., DLO.,

E. N. T. Department, Govt. Stanley Hospital.

Tracheotomy is an emergency operation performed to allow the patient to breathe through the neck when there is acute laryngeal dyspnoea as a result of obstruction in the upper part of the larynx or the cervical part of the trachea. It is an operation done to relieve the respiratory distress and put the larynx at rest. More often than not, it is a common sight to see a patient brought by a relative to the out patient clinic having a hurried respiration, a stridor, a croup and ashen grey pallor of the face. Prompt examination of the larynx with a mirror sometimes gives us an idea as to the cause of the obstruction. If the cause is not known, it is no use sitting and debating acadamically. Hesitancy and delay end in disaster. Instead earlier the tracheotomy is done, the better. As others would want to, never wait for the cyanosis to develop. It is then too late to do a tracheotomy and save the patient or atleast a hasty tracheotomy is done with improper de-cannulation and subsequent stenosis of the larynx. It is a truism to say 'we always preach early tracheotomy, but we always perform it too late'.

There are exceptions, when a tracheotomy is delayed either due to want of proper assistance or equipment or when the dyspnoea is not acute. In such times eternal vigilance is the watch word; for the dyspnoea develops gradually and the end-stage is too shockingly sudden to save the patient.

During the stage of wait and watch, never give morphia. It may be lauded elsewere but in a case of laryngeal dyspnoea it is a taboo. It quitens the patient to such an extent that he or she sinks in his or her own secretion. It is said morphia and mortality are twin brothers in a case of acute laryngeal dyspnoea and tracheotomy.

Technique :

It is a simple operation which needs a little boldness without being foolhardy and a little quickness without being hasty. The patient is kept in a recumbent position with neck and head well extended. Local aneasthesia of 2 per cent novocaine with a little of adrenaline may be used. A midline incision is made from the tracheal notch to the sternal notch. Separation of fat and ribbon muscles would reveal the corrugated surface of the trachea. Separate the tracheal fascia by holding the trachea firmly between the thumb and forefinger. If the thyroid isthmus comes in the way, either lift it by a hook or divide it after ligation. It is preferable to do a low tracheotomy or a median one than a high

tracheotomy at the upper border of isthmus where the division of first and second rings may lead to perichondritis of the arytenoids, fixation or stenosis. Make an incision between fourth and fifth tracheal rings and use a tracheal punch. It is profitable to verify that the tube of proper size is used and that the inner tube is slightly longer than the outer one. These minor details if overlooked, lead to major troubles later on. Introduction of the tube is bound to produce a bout of irritant cough and it is sometimes advisable to instil a couple of drops of novacaine to quieten the patient. Aspirate all the mucus secretion and close the wound after tying all the bleeding points.

After care...

In tracheotomy is very imperative. Oxygen-carbon-dioxide cylinder and a suction apparatus must be kept handy. The inner tube must be cleaned as frequently as possible. It is best done quickly by passing a thin rubber catheter from one end to another instead of cleansing with a feather or a kutchi which is tedious and cumbersome. The outer tube must be removed and replaced once daily. In certain cases where the secretion in copious, I have found injection of atropine ½ c.c. 1 in 1000 useful to lessen the mucous secretion.

Removal . , .

Tracheotomy tube is removed when the respiratory distress has ceased or when the patient is able to breathe through natural passages. It is safe to close the lumen of the tracheotomy tube for 24 hours and if after that the patient is comfortably breathing it is confidently removed.

To make doubly sure, that the patient is breathing through the nose, hold a wisp of cotton which moves with each respiration or a small mirror before the patient's nose, when a thin layer of mist forms every time the patient breathes out.

There is no need to put secondary sutures to the trachetomy opening. It heals by first intention leaving a thin scar.

Prognosis . . .

Is good provided timely tracheotomy is done and cause of laryngeal dyspnoea attended to.

Search for the cause of acute laryngeal dyspnoea after having done the tracheotomy. It may be due to acute infection like diphtheria seen most commonly in children or angio-neurotic oedema mostly, in adults or due to syphilis, typhoid, tuberculosis or leprosy. Traumatic conditions as a result of faulty instrumentation, impacted foreign bodies, direct injuries as a result of accidents or attempted suicide are other causes. Neoplasms from within or around must be borne in mind. Abductor paralysis of vocal cords and cricoarytenoid fixation and retro-pharyngeal abscess must be thought of.

Acute laryngeal dyspnoea must be recognised from other dyspnoeas due to asthma, lung abscess or due to diseases. mediastinal, cardiac or pulmonary. In these conditions there is indrawing of supra sternal notch which is the diagnostic symptom of acute laryngeal dyspnoea due to obstruction.

Author's note :

If some of the minor points are dealt with rather minutely it is because this article is meant purely for the under graduates who may be the enfente doctors the next dawn.

He who can does ; He who cannot, teaches.

—*Shaw.*

Surgical Shock
Physiological & Clinical Considerations

BY

Dr. K. MADHAVAN KUTTY, M.B.B.S., M.SC.,
Tutor in Physiology, Stanley Medical College.

It has been customary to divide conditions of shock into two water-tight compartments, namely primary shock and secondary shock which has also been styled as wound, traumatic or surgical shock. It has to be admitted to-day that this classification is rather artificial and that in most instances, the one merges insensibly into the other. Be that as it may, we shall confine our consideration only to surgical shock, that is the state of collapse that follows a few hours after severe tissue injury and shall exclude primary shock which has a nervous basis and in which pain and psychic factors through their effect upon the vascular system play a prominent role.

Shock is characterized by an insufficiency of blood flow to vital organs which maintain health. Usually the patient in shock has a "fast, thready" pulse, "cold, clamny, pale, cyanotic" skin, mental dullness, weakness, low blood pressure and oliguria [1]. Shock can be the end result of a number of related, inter-related or even unrelated physical, mechanical, neurological, chemical and metabolic reactions, which cause a disparity between the size of the intravascular "space", the amount of circulating fluid "volume" within the space, and the degree of blood "pressure" applied to that volume by the heart muscle. These mechanisms can result in a reduction of the blood supply to the vital organs, which in turn can cause death.

Shock, therefore, is usually a disparity between space, volume and force [2 3]. It has been proved that the cause of low blood pressure is not primarily cardiac, as the heart of an animal in deep shock is found beating vigorously. The constriction of the arterioles of the splanchnic, and cutaneous areas is probably a compensatory reaction, which has disastrous results. Fatal shock can be produced by prolonged vasoconstriction induced by continuous administration of adrenaline (Erlanger and Gasser [4]). Increase in the corpuscular concentration or haemoconcentration as this has come to be called, has been described as an important feature of shock and on this is based the general belief that an essential and fundamental feature of secondary shock is the leakage of plasma from the capillaries as a result of undue permeability of their walls. But the loss of plasma through excessively permeable vessels remote from the injured region has yet to be proved. Widespread capillary dilatation is a factor which is generally thought to be present in, and largely responsible for the shock state. A considerable body of evidence can be cited in support of this belief. Morrison and Hooker[5] observed an increase in the volume of an intestinal loop when shock supervened and Mann[6] found that, whereas 24% of the blood volume of an animal is held in peripheral vascular areas and the remaining 76% in the heart and larger vessels, in shock 61% was contained in peripheral vessel. Knisely and Block[7] have described a sludge-like massing of blood cells in human capillaries as a result of even mild trauma. This can be an important factor in reducing circulating blood volume, and slowing the peripheral blood flow and may be even concerned in initiating shock.

Theories concerning the cause of surgical shock.

Having discussed the pathophysiological factors leading to surgical shock, it will be worthwhile to give a consideration of the various theories that have been put forward from time to time regarding the causation of surgical shock. In this as in all other scientific problems the multitude of theories have only helped to focus our attention on our ignorance about the basic mechanism of shock.

Among the many theories which are mainly of historic importance may be mentioned,

(1) Exhaustion or paralysis of vasomotor centre as a result of its bombardment by sensory impulses from the traumatised tissue (crile),

(2) Blowing off of co_2 (acapnia due to stimulation of the respiratory centre by afferent impulses arising from the injured part (Y. Henderson),

(3) Multiple pulmonary emboli by the fat globules discharged from damaged bone and subcutaneous tissue (Porter) and,

(4) adrenal exhaustion (swingle).

All these theories have been based on unsubstantiated evidence and they have only to be stated to be rejected. Of these, swingle's theory appears to be the most attractive, since low blood pressure and collapse follow adrenalectomy. Even so, the effects of the operation appear comparatively slowly (about 4 or 5 days) and there is also no evidence to show that there is an insufficiency of adrenal hormones in most cases of shock. Moreover the cortical principles are of uncertain benefit in most cases of shock.

The Toxaemic Theory is of of rather modern origin. A few years before the world war, Dale and Laidlaw had reported about the action of histamine. Struck by the resemblance of the effects of this amine to certainfeatures of traumatic shock, Dale, Laidlaw and Richards[8] in 1919 reinvestigated its actions. Histamine effects a profound depressor effect on the circulation, and also produces transudation of plasma from the vessels due to peripheral vascular dilatation. The features of the effect of histamine resembled shock. Certain clinical observations were also in accord with a texaemic theory as for example, a torniquet to an injured limb postponing and amputation of an injured limb preventing the onset of shock. Moreover, injury to muscle, which it was presumed was relatively rich in vasodilator substances such as histamine, was especially likely to be followed by shock. This theory got the onus of experimental proof by the work of Cannon and Bayliss who crushed the limbs of animals and reported a fall in blood pressure which could be prevented by occluding the vessels from the limbs, whereas division of the nerves did not prevent this fall. Thus the toxaemic theory of shock in which a histamine-like substance or histamine itself was the responsible agent seemed well-authenticated. But latterly this theory has lost much of its force due to the inability of other workers to repeat the work of Cannon and Bayliss and also due to the inability to demonstrate histamine in the blood of these animals.

The Theory of Local fluid loss:

Blalock[9] caused shock in dogs by inflicting severe contused injuries to a limb by beating with a mallet. His experiments have shown —

(*a*) A circulating toxic substance is not responsible for the shock syndrome.

(*b*) Transudation of Plasma from vessels remote from injured tissue does not occur.

(*c*) The reduction of blood volume in surgical shock can be accounted for entirely by the escape of blood and plasma from vessels at the site of injury.

The third deduction which is highly significant is based upon the comparison of

the weights of the injured and sound limbs. In some experiments as much as a third or a half of the total blood volume was calculated to have entered the traumatized area. The loss of this amount of circulating fluid is itself sufficient to cause death. Thus Blalock and his followers conclude that there is no essential difference between shock and the state induced by haemorrhage. The theory of local fluid loss explains the phenomena of shock best and has the most logical experimental proof to support it.

The VDM—VEM concept.

The condition of shock can usually be divided into two stages, the reversible and irreversible. In the first stage, the animal is amenable to treatment and the blood pressure is quickly raised from shock level to normal by transfusion. During this period, the minute vessels are hyperactive to local stimulation. If left untreated the animal passes into a stage in which treatment is of no avail. This is called the "irreversible stage." According to Zweifach[10] and his associates, these two stages are also characterized by the appearance of certain pressor and depressor principles, which they have called vasoexcitor and vasodepressor material (VEM and VDM). VEM and VDM are produced under anoxic conditions, the former from the kidney and the latter from the liver. In the reversible stage of shock VDM is destroyed by an enzyme system in the liver and hence VEM has its sway. In the irreversible stage this mechanism fails and VDM accumulates. Markowitz [11] has pointed out that shock due to severe trauma may sometimes be irreversible from the start. This suggests that a factor other than, but in addition to local fluid loss is responsible for the fall in blood pressure in shock. This factor may be VDM.

Management of shock.

It will be well to mention a few points regarding the management of a case of shock before we conclude. As has been pointed out earlier, the problem is one of adjusting space, volume and pressure. Vaso-constrictors like Pituitrin and Noradrenaline help in combating the condition by decreasing the disparity between space and volume. The futility of adrenaline in this regard has been discussed earlier. Administration of adrenal cortical extracts is of dubious value in the treatment of this condition unless there is adrenal cortical insufficiency in the particular case, when it could be a life-saving measure.

Since shock has no many causes, it has, therefore many treatments. Shock due to infections may respond to antibiotics ; if due to neurological disorders it may respond to ACTH or cortisone ; it may respond to psychiatric reassurance if due to emotion ; if due to toxins it may respond to amputation or surgical or needle drainage ; if due to mechanical interference it may respond to pericardectomy or valvulotomy. However, in the majority of cases of shock, replacement of fluid volume is the most widely used therapeutic procedure. This is a confirmation of the theory that local fluid loss is the potent causative factor in shock.

The agents that can be used are (1) whole blood obtained from human donors (2) plasma (donors) (3) albumin (4) dextran—a polysaccharide obtained from beet sugar by bacterial degradation (B, Leuconostac mesenteroides) (5) gelatine obtained from animal bones (6) polyvinyl pyrrolidine, a synthetic polymer of acetylene. Whole blood and plasma have the disadvantages of transmitting hepatitis, malaria, viruses, syphilis, of causing abnormal immunization processes and of causing allergic manifestations. Dextran, Gelatine and PVP are stored for abnormal periods in liver and cause agglutination of R.B.C. Therefore, it appears that albumin is the treatment of choice in shock. Fundamentally it is nature's agent for maintaining blood volume, because it has the highest osmotic pressure of all blood proteins. Its manufacture precludes hepatitis and most disease agents as also allergens and pyrogens. The researches of Cohn [12] and his associates have helped in the easy fractionation of blood with their ADL-Cohn blood fractionator.

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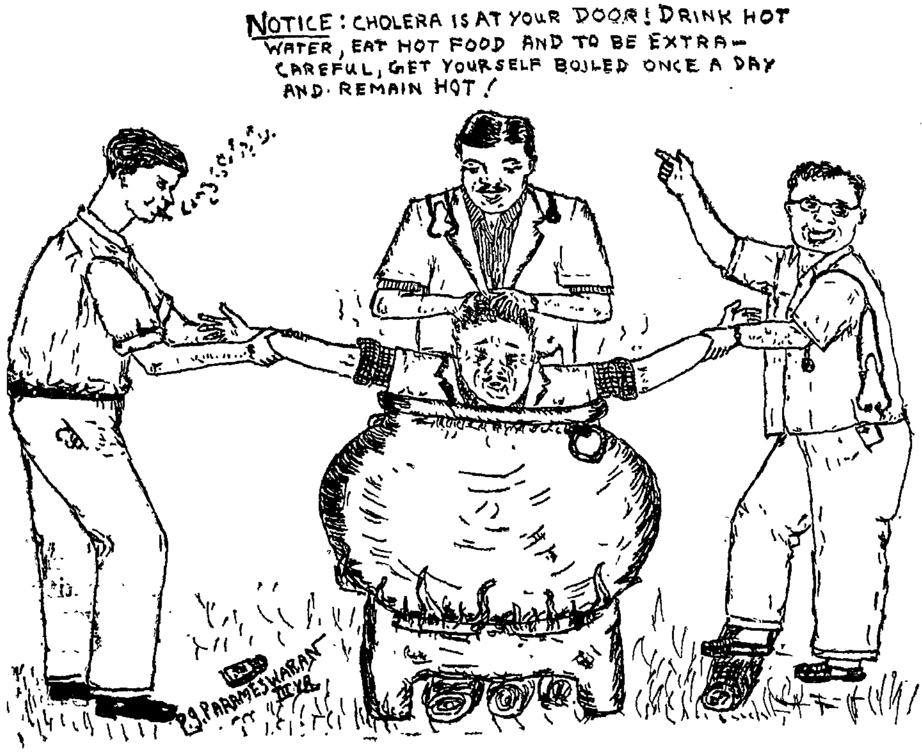

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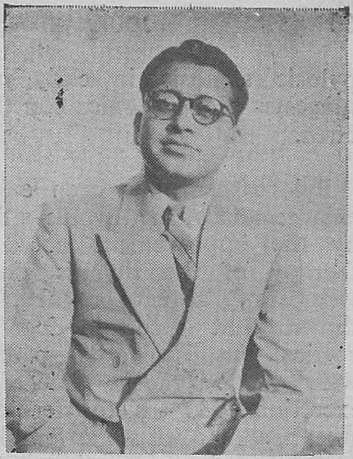
Infantile Pyloric Stenosis



BY

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Congenital pyloric stenosis is not a rare disease in children. The condition was initially reported by Blair of England (1717) and Weber of Germany. But Hirschsprung gave the first complete description of the disease. The incidence is 1 in 150 new born male infants. According to Cervera and Pinto Pyloric stenosis is more frequent in infants born to well-off parents and in children born in large cities. A greater incidence is evident among the new born males (80 per cent) than among female (20 per cent) and it is said it is more common in infants of Anglo-Saxon origin. It occurs in premature children also with a similar sex distribution.

In 30 per cent of premature infants with this affliction vomiting started earlier than normal. Sometimes during the first two weeks of life. The free interval i.e. the period between birth and first vomiting is not influenced by weight at birth or the degree of prematurity. The clinical picture is incomplete or abortive making the diagnosis difficult.

Pyloric stenosis is customorily called a 'congenital disease' However, Stoeber, lists several factors against the theory. For e g. I. Existence of a silent or latent symptom-free period 2. Clinical improvements after medical or surgical therapy followed by functional and anatomical recovery and the absence of other congenital abnormalities. In the view of these facts Valente of Italy gave the name "Infantile pyloric stenosis" rather than congenitial pyloric stenotic hypertrophy- There is no doubt that there exists a fami. lial tendency, for the disease has been found in several pairs of monozygotic twins, in several successive generations and the social heterozygotic siblings.

The typical clinical picture of this disease is that of an apparently thriving child of 2–4 weeks, usually a first born male with a persistent "projectile" vomiting following each feed, with a marked dehydration, visible peristalsis and a palpable lump in the pyloric region of the stomach. The vomiting is "projectile" because it assumes great force. It never contains bile. There is no nausea or sign of gastro-intestinal infection. Skin becomes lax, fontanelles sink, the tongue becomes dry and urine scanty and he is constipated. This typical picture may not be present in all the cases.

Pathogenesis . . .

The cause and mechanism of this disease are still obscure. Congenitally hypertrophic pyloric musculature, might after birth, in the predisposed individual, be complicated by a spasmodic factor—possibly due to external environments including feeding. There is an achalasia – a primary failure of the pylorus to relax. Cervera Pinto points out the neuro-vegetative imbalance in which vagotonism is prevalent. Steinike in analysing the histories of patients with gastritis and peptic ulcer discovered that 28 per cent of them had been treated for

pyloric stenosis in early infancy. This suggests a vagotonic constitution since birth.

Pylorospasm has been associated with enlargement of the thymus–a fact confirmed by the improvement noted after radiotherapy of the thymus gland. Recent studies of adrenocortical function have shown that a certain degree of adrenal cortical insufficiency is present in infants with pyloric stenosis. A decrease in urinary excretion of 17 - Keto steroids as well as the appearance of some feminine characterestics like gynecomastia suggest a possible endocrine imbalance as the pathogenic factor. The favourable results obtained with androgen therapy and adrenocoritcal extracts lend support to the theory.

Pathology :

The muscle coats of the stomach are hypertrophied. The circular fibres in the region of the pylorus is hypertrophied. The lumen of the stomach narrows down as the pylorus is approached. The hypertrophy ends abruptly and the duodenum is normal and the pylorus looks like cervix uteri when viewed from the duodenum. The mucosa in the pyloric antrum is thrown into folds. At necropsy, the stomach shows petechial heamorrhages and mucous catarrh.

Diagnosis . . .

A definite diagnosis can be easily made in most of the cases. The abdominal examination should be done gently and patiently. The mass can be easily felt close to the rectus border especially after the child has vomited. Another important sign is the visible peristalsis crossing the distended stomach from left to right.

X-Ray . . .

Gastric Roentgenography with barium meal is of diagnostic value. The x-ray plate shows dilatation of the stamach and an elongated, narrowed pyloric canal. An oblique view of the stomach gives better visualisation.

Differential Diagnosis . . .

In doubtful cases the following conditions have to be differentiated :

1. Gastric catarrh . . . —Pylorospasm Enteritis. These are due to an unassimilable diet. Both sexes are affected equally. There is no accumulation of gastric contents. No V.P. seen. In enteritis, the diarrhoea accompanies vomiting, occasionally this can occur in pyloric stenosis also.

2. Congenital atresia of the duodenum. Vomiting starts from the very first day of birth and is bile stained.

3. The constipation and projectile vomiting due to intracranial disease, is sometimes very difficult to differentiate from congenital stenosis.

4. Rarely an aberrant pancreatic nodule may totally obstruct the duodenum thus simulating pyloric stenosis.

5. Cardio chalasia of the oesophagus (opposite of cardiospasm).

Persisting vomiting without bile and with no other signs of hypertrophic pyloric stenosis.

Treatment . .

1. Correction of dehydration and electrolyte imbalance.

2. Medical.

3. Surgical.

The first step in therapy is correction of dehydration and electrolyte imbalance. There is a significant loss of HCl, water, Na, and K resulting in hypochloreamia hypokalemic alkalosis with increased plasma carbondioxide content. This should be corrected with proper therapy by giving parenteral solutions of glucose,

sodium and K chlorides in the amounts indicated by the chemical findings. Plasma or whole blood transfusions may be useful in very sick children. Administration of antibiotics will protect the child against infection.

The conservative line of treatment of pyloric stenosis (Medical) consists in giving milk in small quantities at frequent intervals with curd and (fat reduced) aspirating the stomach a little before each feed, so that no residue collects in it. Gastric lavage is given with saline. The most potent drug is Eumydrin (Atropine with Methyl nitrate or Antrenyl Ciba). The dose is ½–2 c.c. 10–15 minutes before each feed. These drugs reduce the motility and secretions of the stomach and intestine and relieve the spasm of the pylorus. Some use 100 mgms of banthine I.M. every 24 hours until the spasm is completely relieved. The duration of the medical treatment varies between 60–70 days and in premature infants between 50–60 days. In a successful case the symptoms gradually disappear. There is gain in weight and the child grows up to fit his enlarged pyloric musculature.

If the treatment fails, surgery is indicated. The results are good in breast fed children and in experienced hands, it yields immediate results with a mortality rate of less than 2 per eent. The Fredet—Rammstedt's operation is the procedure of choice. Surgery can be done under local or general anaesthesia (Gross) with open drop ether. The argument against local anaesthesia is that the anaesthesia infiltration of the dehydrated tissues of the abdominal wall makes for slow healing and increases the liability to post-operative bursting of the abdominal wound.

The abdomen is opened by 2″ long right paramedian incision, the lower end of the incision being above the lower border of the liver. In these cases the liver is palpable 2—3″ below the right costal margin. After the operation, the liver comes up against the abdominal wound and acts as a protection against burst abdomen. The circular muscle layer of the pylorus is divided without opening the gastric and duodenal mucosa. After surgery, the resumption of nutrition by gradual feeding is instituted with the child returning progressively to larger feedings. Total recovery takes place in 2—3 weeks.

Short circulating operations like gastro-jejunostomy besides being formidable procedures in these dehydrated patients carrying a high mortality (50 per cent) do not cure the pyloric stenosis. The changes in the pylorus after Rammstedt's operation have been fully described by Ramshlt and Woolley. The wound in the pylorus is covered by serosa in nine days and while the gap is slowly filling wlth fibrous tissue, atrophy of the pyloric muscle takes place and before the fibrous tissue has contracted to a fine scar the pyloric mucle has returned to a normal thickness. Rapid emptying of the stomach takes place 13 weeks after the operation, the rate being reduced to normal after 9 months.

Post operative complications—

1. Enteritis—Usually bacterial in origin and is common in cases treated in the open general ward.

2. Chest complications.—More common after general anaesthesia and hence some advocate local anaesthesia and segregation of " Pyloric " babies.

3. Burst abdomen—More common with dehydrated babies and can be prevented to some extent by the type of incision described.

4. Peritonitis—does not occur unless the duodenal mucous membrane has been punctured and left open.

5. Vomiting—if it comes after the operation unaccompanied by nausea, should suggest that the pyloric muscle has not been completely divided.

6. Post operative pyrexia—is rather common and is not necessarily of serious consequence. Successive tepid sponging is advisable.

Summary—

(*a*) Early diagnosis based on palpatiou of the tumour. Radiology has little to offer to the experienced clinician.

(*b*) Rapid and proper pre-operative correction of electrolyte imbalance, control of infection, no time being wasted on medical treatment.

(*c*) Ineision high up in the epigastrium, above thc liver margin.

(*d*) Delivery of the pyloric tumour with very little disturbance of the abdominal contents.

(*e*) Incision into the pyloric tumour, the division being completed with a blunt instrument like a haemostat.

(*f*) Early discharge from the hospital to avoid infection and to facilitate continuation of breast feeding.

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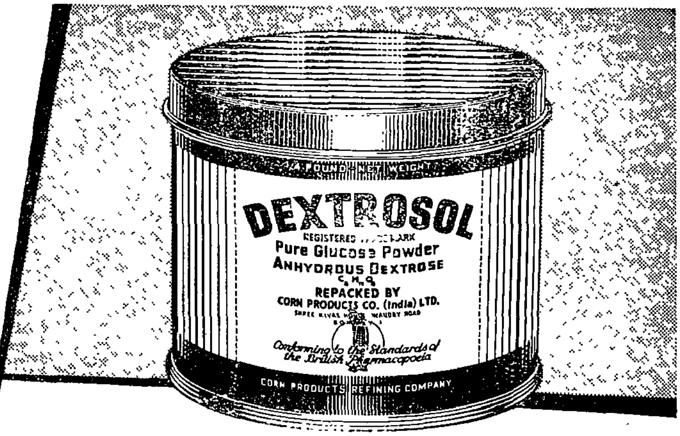

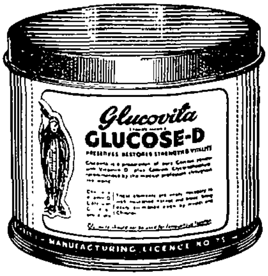

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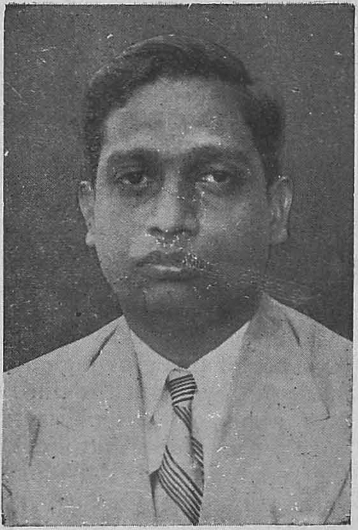
BURNS AND SCALDS



BY

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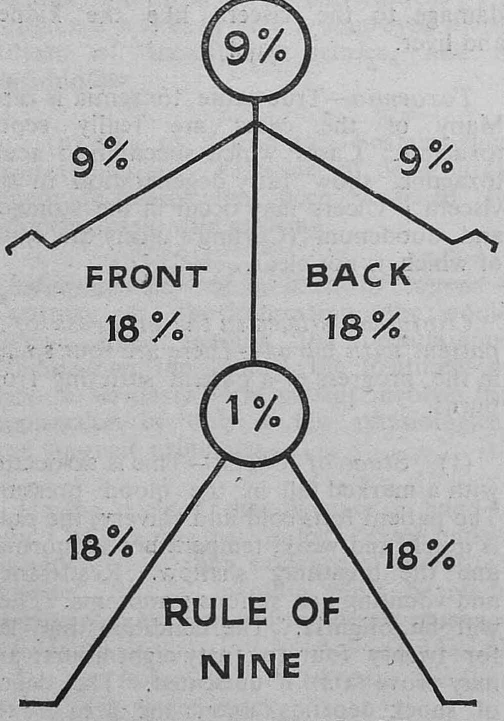
Assistant Professor of Surgery, Stanley Medical College, Madras.

Definition—A burn is a coagulative destruction of the surface layers of the body and sometimes of the deeper tissues as well. The cause of this destruction is usually the application of heat. If the heat applied is moist the lesion is termed a scald. Electric current, X-Rays, radium emanations, ultra-voilet rays, and chemical caustics may occasion similiar lesions.



AFTER A. B. WALLACE

Estimation of the size of a burn—The area of skin involved in the burn, is expressed as a percentage of the surface area of the body, using the " Rule of nine" (refer diagram). Another basis of computation that is sometimes of value, is the fact that an area equal to the palmar surface of the patient's hand approximate to 1% of his body surface area.

The simplest and the most practicable method of classifying burns according to depth, is to divide thcm into superficial and deep types. A superficial burn is one that involves but does not destroy skin. In a deep burn, there is whole thickness loss of the skin. Very often the two types can not be differentiated at the time of injury. Skin which might appear to be only partly destroyed may slough off at a later date. Conversely, what may appear to be grossly damaged skin may show after a time islands of growing epithelium that has survived.

Pathology—The effects of a burn are local and systemic. The local changes affect the skin and the blood vessels in relation to it. Deep burns may involve other structures like muscle and bone.

Skin and subcutaneous tissue—In a very mild injury there may be just an erythema or local vasodilatation. But in burns of some severity, there is a coagulative necrosis of part or whole of the skin. The necrosed skin separates off as a slough in the course of two to three weeks. The slough is larger if infection has been introduced. In a superficial burn the damaged tissue is replaced by epithelium that grows out from the deeper layers (Malphigian layer) of the skin. The presence of this growing epithelium may be made out by about the third day as punctate areas of vascularization. In deep burns, the ulcers that are left behind after the separation of the slough are filled with granulation tissue, which in turn is converted into scar tissue. Epithelial cover can come only by epithelium growing in from the edges, and this is slow, uncertain, and incomplete. Unless the raw areas are skin grafted, contractures set in.

Damage to blood vessels and blood cells—Damage to the capillary membrane results in its increased permeability. As a consequence, protein rich fluid escapes into the tissue spaces at the site of burn. The exudatin is most rapid during the first eight hours and reaches a peak forty-eight hours after the burn. At this time, the capillary membrane recovers its function and the abnormal permeability ceases. Steady dimunition of the oedema occurs thereafter as a result of reabsorption of the exudate. The protein content of the exudate is less than that of plasma and more than that of tissue fluid. The amount of exudation could be diminished by postural elevation, exposure to cold, and perhaps by pressure dressings. In deep burns the dermal capillaries are coagulated, and the red cells within them destroyed. Some of the red cells that manage to survive are rendered more fragile. A specific haemolytic factor is said to be produced at the site of injury. The function of the marrow is depressed by circulating toxins. All these factors contribute to the secondary anaemia that occurs in burns.

Alteration in blood volume—There is an initial oligaemia and haemo-concentration, followed by a stage of plasma dilution In the initial phase, there is a slight rise of the portein content of the plasma and consequently its oncotic pressure. This in turn leads to absorption of fluid from the tissue spaces of unburnt areas, into the blood stream, giving rise to the second phase of plasma dilution.

Cellular dehydration to tissue anoxia-When fluid from the tissue spaces enters the vascular compartment, the protein content of the fluid in the tissue spaces rises. To dilute this protein water escapes from within the cells leading to dehydration of the cells. If the dehydration is not corrected cellular damage occurs. Anoxia of the tissues is due to a combination of factors—the cellular dehydration, the lowered blood pressure due to shock, the loss of red blood cells, damage to the respiratory passages, and the presence of circulating toxins. Anoxia of even a moderate degree and over a comparatively short period, will cause permanent damage to the viscera like the kidney and liver.

Toxaemia—True acute toxaemia is rare. Many of the cases are really septic toxaemia. Cases which succumb to acute toxaemia, show fatty degeneration in the viscera. Ulcers may occur in the stomach and duodenum (Curling's ulcer) the cause of which is not clear.

Clininical stages in the progress of a patient with burns—There are four stages in the progress of a patient suffering from burns.

(1) *Stage of Shock*—This is associated with a marked fall in the blood pressure. The patient feels cold and shivery, the pulse is quick and weak, temperature subnormal, and the breathing shallow. Restlessness and vomiting are serious symptoms. There will be oliguria. The condition may last for twenty four to forty eight hours, and may prove fatal if untreated. The degree of shock depends upon the area of the

burn and upon the age of the patient. The shock is severe in children. The shock is mainly due to oligaemia but partly due to pain and fear.

(2) *Stage of sepsis*—Owing to the destruction of the tissues, a burn gets infected very easily if precautions are not taken. Sepsis is accompanied by local pain and a rise of temperature.

(3) *Stage of separation of sloughs*—The natural separation of the slough which is completed by about the end of the third week can be accelerated by surgical excision or enzyme debridement.

(4) *Stage of healing*—As already mentioned in the discussion of pathology, the type of healing depends on the depth of the burn.

Prognosis—(*a*) As to life : Burns and scalds have a worse prognosis in children and in the aged. Extensive superficial burns have a worse prognosis than smaller deep burns. Burns on the trunk are more serious than those on the extremities. The prognosis has been greatly improved by the advent of transfusion service, and of anti-biotics.

(*b*) As to deformity: Scarring and contractures are sequelae of deep burns. There incidence has been lessened by adopting early skin grafting.

Management of a case of burns—Contrary to the impression one would receive from reading the voluminous literature on the subject, the treatment of even a seriously burnt patient involves the application of only a few physiological and surgical principles.

Having decided that the case on hand is one of burns a quick examination should be made for evidence of associated injuries. Special mention must be made of injury to the eye and to the air passages

In the treatment of the case the first attention is to the shock.

Treatment of the shock is by—

(*a*) Fluid replacement.

(*b*) Sedation.

(*c*) Oxygen and Cortisone.

Fluid replacement—is the first requisite in the treatment of a burnt patient. The questions to be answered when the fluid replacement is to be given are :

(i) *What is the amount of fluid to be given ?*

The quantity of fluid given is proportional to the area of the burns and to the normal blood volume of the patient. The blood volume depends on the age of the patient. If the age of the patient is known by referring to the table we would know how much of fluid to give for each per cent of burnt area. Another modifying factor comes in for very extensive burns. In burns over 30%. a separate table is used. In these patients the surgeon must remember that the extracellular body fluid amount to 20% of the body weight and that the maximum expansion of this space compatible with safety is 50%. The safety level for these patients is therefore 10% of body weight. In other words, in cases of burns that affect 30% or more of the body surface the quantity of fluid to be be given depends on the weight of the patient and not upon the extent of burns.

In all patients in addition to the replacement fluid the metabolic requirements must be met with. This fluid is required for normal renal function and to make up the loss of water from gut, skin and lungs. The table showing the metabolic requirements under temperate conditions is given. It is important to remember the two types of fluid—the metabolic and the replacement fluids.

By what route should the fluid be given?—Patients with burns of less than ten per cent area can take their fluid requirements by mouth. In all others intravenous administration is necessary.

At what rate is the fluid given and for how long ?—Normally replacement fluid is required only for 48 hours. Thereafter the metabolic requirements can be taken by mouth. The calculated quantity of replacement fluid is divided into three parts. The first third is given during the first eight hours. Second third is given in the 9–24 hours period and the remaining fluid in the 24–48 hours period.

(35 drops a minute—One Litre in 24 Hours).

Age in years	For burns up to 29% of body surface total volume of fluids during first 48 hours for 1% of burnt area (C.C.)	For burns above 30% of body suface total volume of fluid required for 48 hours (C.C.)	Normal daily metabolic rquirement of fluid under average weather condition (C.C.)
3/12	14	500	700
3/12–6/12	20	700	1,000
6/12–9/12	24	900	1,150
9/12–1yr.	26	1,000	1,200
1— 2	30	1,100	1,300
2— 3	42	1,500	1,400
3— 4	48	1,700	1,400
4— 5	54	1,800	1,400
5— 6	62	2,000	1,500
6— 7	70	2,200	1,500
7— 8	80	2,400	1,500
8— 9	88	2,600	1,600
9—10	92	2,900	1,600
10—11	102	3,200	1,700
11—12	112	3,500	1,700
12—13	124	3,900	1,800
13—14	134	4,300	2,000
14—15	156	4,800	2,200
15—16	176	5,400	2,400
16—17	192	5,900	2,600
17—18	208	6,500	2,800
Adult	220	7,000	3,000

The replacement fluid is given as follows :—

0—8 Hours — one third volume
9–24 Hours — one third volume
25–48 Hours — one third volume

The daily metabolic requirement is added on to this and given during each 24 Hour period.

A table showing the normal weight for different ages is given.

In addition to this replacement fluid the calculated quantity of metabolic fluids is given during the corresponding 24 hour period.

The tables and formulae are only rough guides as to the amount of fluid required. The best check on the adequacy of fluid therapy is an hourly check on the urine output. A satisfactory urine output in adults is around 50 c.c. per hour (Ref. table) Haematocrit and haemoglobin values are not so useful for two reasons. Firstly one does not know the normal for the particular patient and secondly urine volume change precedes the changes in the haematocrit and Hb.

What is the nature of fluid given ?—

This depends on the nature of the burn. The calculated quantity of fluid is divided in the following ratio :

Superficial burns : Equally between plasma and saline.

Deep burn and extensive superficial burns : Half as blood and the rest divided equally between plasma and saline.

An important point to remember is that no time should be lost in starting the transfusion, with any available fluid. Adjustment could be made subsequently. If plasma is not available in sufficient quantity plasma substitutes like Dextran and polyvenyl pyrollidine could be used.

Sedation—Morphine has been found to be the most satisfactory sedative. The drug should be given slowly by the intravenous route, to avoid the danger of accumulation and sudden absorbtion of successive doses from the subcutaneous tissue.

Oxygen—at the rate of three litres per minute is of help. It is especially important that one does not try to treat the restlessness or mania of anoxio with morphine. An oxygen tent or even a tracheotomy is more appropriate.

Prevention of infection—The best prophylactic against infection is the proper care of the burnt wound. But in addition the patient is given ten lacs of Penicillin and one gram of Streptomycin daily for about two weeks. A prophylactic dose of Anti-tetanus serum as also Anti-gas gangrene serum (in cases where there is injury to the muscle) is administered.

Nutrition of the patient—Patients with burns require a high protein and calorie intake to heal their wounds, to replace the extensive loss as a result of the katabolic response to injury and loss from the wounds, and to restore their general well being, but often they are unable or too exhausted to take such an intake in the usual way. In these circumstances the use of tube feeding by night has been found to be very satisfactory. During the day the patient is encouraged to eat as much as possible without unduely bothering him.Each evening a fine tube is passed via the nose into the stomach and a slow drip feed is given over six to eight hours while the patient sleeps, the tube being removed each morning. The feed at night does not impair their appetite but rather enhances it. Very satisfactory feeds can be madc using skimmed milk powder glucose and a simple fat emulsion, with the required electrolytes and vitamins, the whole being mixed in water with a simple domestic blender. The following formula is a satisfactory basic solution.

Skimmed milk powder	...	110gm.
Glucose	...	70gm.
Fat emulsion (50%)	...	150cc.
Sodium chloride	...	3gm,
Potassium chloride	...	3gm.
Water	...	1200c.c.

The above solution provides forty grams of protein and 1,400 Calories. The benefit from this night tube feeding regime is often dramatic. With the establishment of a positive nitrogen balance not only do the patient's wounds begin to heal rapidly, but his vigour and appetite return and within a week or ten days it may be possible to discontinue the treatment and return to normal oral feeding. Some writers have suggested that the anabolic processes may be stimulated by giving various hormones, such as testosterone, but there is no conclusive evidence that they are effective, and their use is certainly harmful if it deflects attention away from the prime need to increase the protein and calorie intake.

The local treatment can be discussed under two heads.

1. The immediate local treatment. Dressing and the exposure treatment.

2. Subsequent local treatment · Skin grafting and other plastic procedures.

Immediate local treatment—It now appears that the best way to treat a burn is to put a large dressing on it and leave it alone until healing or sloughing takes place. An alternative method which has great applicability is the open air method advocated by A. B. Wallace. Although remarkable results have been obtained by the exposure and dessication of the lesions, it is probable that most burns will continue to receive a primary dressing. The sooner this dressing is applied, the sooner the patient is comfortable and sooner the danger of infection minimised.

It is well known that the minor burn is apt to heal surprisingly well regardless of how it is treated. In the dressing of the patient aseptic procedure is adopted as far as is practicable. The patient is dressed in the operation theatre. The burnt garments are removed and the extent of the burn is estimated. The preparation of the burnt surface for the dressing is simplicity itself. There is no preparation. No debridement or washing is done. The unopened blister with the plasma bathing the underlying injury is probably the ideal dressing. It is useless to try to remove organisms which have been deposited in the wound, since the fire has sterilized the skin far better than any chemical or mechanical method

which might be proposed. No medication of any kind is applied to the burnt surface. It is now well established that tannic acid, triple dyes, sulphonamides and any of the hundreds of advertised proprietary remedies are likely to do more harm than good. Very lightly vazelined guaze is placed on the burnt surface. Over this is placed bulky gamgee tissue. An ordinary bandage is applied firmly. If available an elastic bandage could be used. Dressings on the extremities should extend out to the tip of the toes or fingers to minimize swelling of the feet or hands. It is not practicable and advisable to try to put pressure on the face or neck. The absence of the dressings makes the eyes available for irrigations, the nostrils available for cleansing, and the mouth available for feeding the patient. In the case of the limbs a plaster cast is given and the limb elevated to lessen oedema.

The purpose of the thick dressing is to absorb all exudate from the burn. If the exudate seeps through to the surface of the dressing, a portal for entry of infection is thereby provided, and the protective value of the dressing lost.

In the open method of treatment the dressings are omitted, the patient placed under a cradle for privacy, and sufficient morphine given for the relief of pain. One is impressed by the freedom from the type of infection which so often occurs in the presence of the moisture inevitably associated with the occlusive dressing.

The exposure method is more difficult to manage when burns involve both the front and the back of the trunk. For burns of the buttock and perineum in children the Bryants method of suspension (i.e., the gallows method) is suitable. When once the crust has formed, (a dry crust forms by about 48 hours) the important consideration is to prevent it from cracking, since if cracks appear infection may follow. For this reason particularly in limbs the affected part must be immobilsed. Separation of the crust takes place by about 14 days, and after the separation one has to decide whether grafting is required. The indications for grafting are the same as when absorptive dressings are used and are discussed subsequently.

In cases that have been dressed, the dressings need not be changed for ten days, though of course they are inspected daily and soiled portion renewed. At this time the presence of punctate areas of vascularisation suggests that there are islands of dermis capable of producing regeneration around them. Such a burn heals without contracture formation in the course of another ten days, and all that is needed is dressing on alternate days. During this period active movements are encouraged.

If at this time no such vascularization is observed, and instead extensive slough, fat or coagulative muscle is seen the case is one of deep burns. If active treatment is not instilled contracture formation is inevitable and no amount of active movements can prevent this. These cases require excision of the slough, and grafting of the raw area with skin. Early excision of the burnt tissue removes a possible source of the circulating toxin as well as removing the areas which would remain infected. The longer the period taken to obtain complete skin cover, the greater the danger of local infection. Unless contraindicated by the poor general condition of the patient skin grafting is undertaken during the third week after the burn. Immediate emergency grafting soon after the occurence of the burn has been advocated by some but is impractible for two reasons. Firstly it is often impossible to guage the depth of the burn at the time of the injury and if excision is carried out, one runs the risk of excising areas where the dermis is only partially destroyed, and which would have healed spontaneously had it been left alone. Secondly in burns of some severity the general condition of the patient will not permit the procedure. The only situation when immediate grafting is practicable is in a circumscribed area of deep burning resulting from contact with a hot object.

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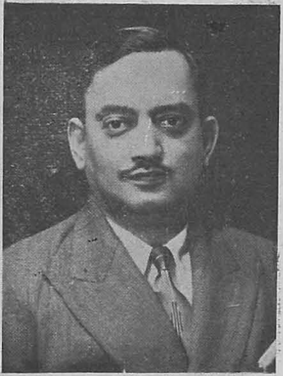

BY

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&
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As the subject is a vast one, an attempt is being made to be as complete as posssible. However stress would be made on acute abdominal conditions.

Orthopedic Surgery requires the help of radiagraphy in the diagnosis and management of injuries to bone and joints. Fractures, dislocation can all be confirmed before treatment, and after treatment, the progress can be assessed by taking radiographs at repeated intervals.

Patients are often brought unconscious with a history of head injury. It is then necessary to diagnose the type of fracture of skull bones to decide whether any immediate surgical interference is required to save the life of the patient. In cases of linear fractures, the radiologist should be able to say whether a vessel like middle meningeal artery is involved. Failure to recognise the seriousness of such an injury will cost the patient's life. Depressed fractures can be surgically treated and the pressure effects could be relieved immediately.

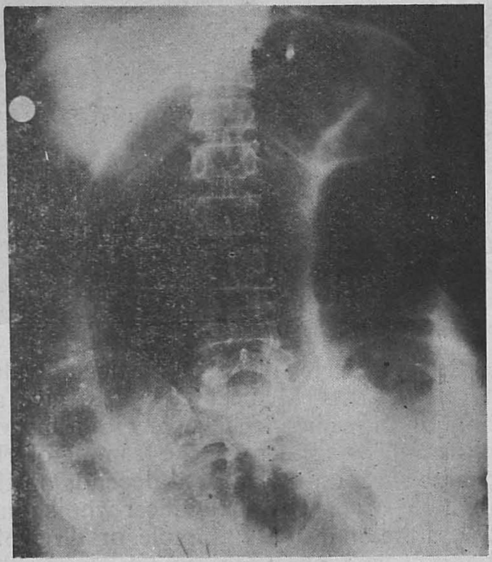
In fractures associated with gas gangrene, the presence of gas in the muscles and inter muscular plane can be demonstrated in a plain X-ray of the part. Similarly Surgical emphysema also can be diognosed. In many of the acute infections of bones and joints nearly 2 to 3 weeks should elapse before we could expect any radiological signs in a skiagram. Hence in acute inflammation it is almost useless.

Radiography will be of particular value to the casualty Medical Officer to give an opinion in medico-legal cases with a history of assault or accident. The framing of the charge sheet on the accused depends on the opinion of the Medical Officer who should assess the offence as " Simple or Grievous injury " and the punishment given also varies accordingly.

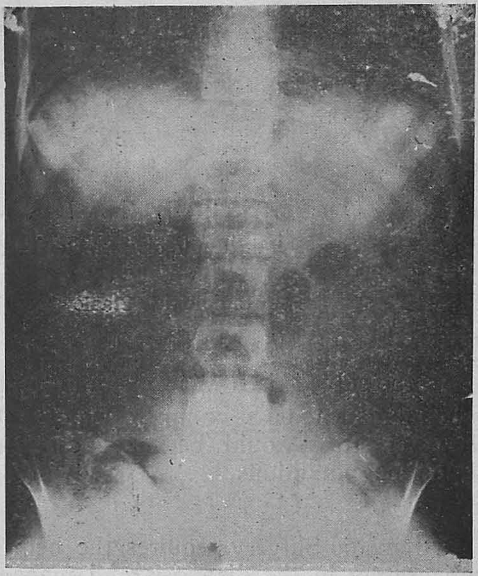
The next acute surgical condition where radiology is useful in diagnosing is the presence of complications of foreign bodies. F.B. in soft tissue requires localisation and so pictures are taken in more than one projection. A non-radio-opaque F.B. lodged in the bronchus can be localised by the collapsed pulmonary segment. Care must be taken in interpretation as to which side the obstruction is, because the radiological appearances depend on whether the picture is taken during inspiration or expiration. When a picture is taken at the end of expiration obstructed lung is emphysematous and normal lung is devoid of air. If the picture is taken at the end of inspiration as is the routine, both lungs may appear normal and the condition is entirely missed.

I.V.P. as an emergency is done in cases of urinary tract rupture to demonstrate the location and nature of lesion and also in severe injuries to the kidney to assess the presence and function of opposite kidney prior to nephrectomy.

Volvulus does not give any definite characteristic radiological findings. However the seat of obstruction can be noted by



Case of volvulus of sigmoid colon showing marked distension of large bowel.



Gas under the right dome of diaphragm in a case of duodenal perforation.

the gas distended proximal loops of the bowel in a plain X-ray film of the abdomen.

In acute amoebic abscess of liver the right dome of the diaphragm is markedly raised and the movements are either absent or very sluggish. In subphrenic abscess gas is seen under the diaphragm and a fluid level is visualised, The position of the fluid level changes with the position of the patient.

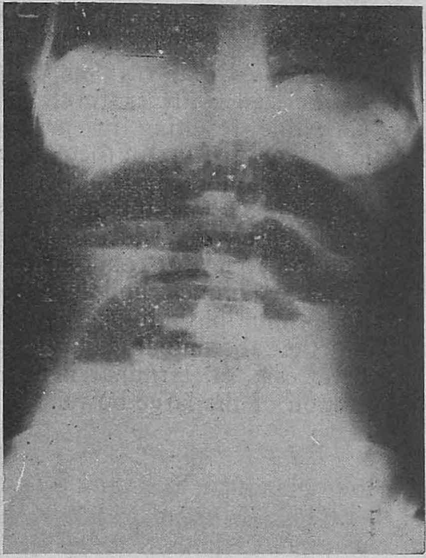
In general Surgery radiography is usefully employed in diagnosis of some acute abdominal conditions. Apart from the various colics where a stone can be visualised either in the urinary or biliary tract, perforation of hollow viscus and intestinal obstruction are two conditions where radiography will be useful.

Presence of gas under the domes of the diaphragm suggests the perforation of hollow viscus iike gastric or duodenal ulcer commonly. Gas shadow under the left dome of the diaphragm should be differentiated from the fundal gas of the stomach which normally casts a shadow.

In intestinal obstruction presence of multiple fluid levels with areas of gas suggests a small intestine obstruction usually. In large gut obstruction the commonest is volvulus of the sigmoid. One loop is seen very much distended and it has the charac teristic appearance.

On the plain X-ray the signs of obstructions are progressively dilating bowel with clear areas of gas and fluid levels. In the case of proximal obstruction fluid level may not be seen because of ease with which stomach and duodenum are emptied by vomiting.

Intussusception is the prolapse of one portion of the intestine into the lumen of an immediately adjacent segment. There are several types. (i) Enteric-Small bowel invaginates into small bowel. (ii) Colic-affects only colon. (iii) ileocolic-prolapse of the ileo-caecal valve into caecum and ascending-colon. (iv) Ileocolic-passage of ileum into the colon. Intussusception is common in children and rather rare in adults. Barium enema is usefull in colonic and entero colonic varieties while barium meal is of value in the study of enteric



Case of intestinal obstruction showing multiple fluid levels.

variety. In the presence of associated obstruction opaque meal study is contra indicated. Barium enema frequently reduces the intussusception. The characteristic appearance is multiple rings at the site of lesion. This is due to barium coating on the margins of the mass which forms the advancing edge of the intussusception. There is obstruction to the passage of the opaque medium and a filling defect is seen. This defect is not constant and varies in size and shape during X-ray observation. The character of filling defect changes after evacuation of the barium enema. The advancing edge of the intussusception may show a smooth, rounded cap like appearance at the site of lesion, or show two parallel lines of density at the peripheral position of the lesion or as series of concentric rings with multiple circular lines surrounding the area of intussusception. After oral administration of opaque meal, similar changes are seen. In addition proximal loop is dilated particularly if there is intussusception of ileum into caecum. If it is caused by a tumour, it is frequently outlined. In plain film, a sausage shaped homogeneous shadow surrounded by the air filled sheath forming 2 peripheral stripes or rings of air is seen.

In new born infants plain X-ray is useful in the diagnosis of acute intestinal obstruction and in the diagnosis of neonatal obstruction, radiology is invaluable. The commonest condition one comes across, is imperforate anus. X-ray helps the surgeon to determine the position of the blind rectal pouch. For demonstrating this Wangensteen and Rice suggested a method utilizing the gas contained in the large intestine to demarcate the blind end of the rectal pouch by taking a plain X-ray of the abdomen and pelvis, while holding the child upside down. By placing a metal marker or a button in the anal dimple the extent of separation between the blind anal end of the rectum and the perineal skin can be demonstrated. If there is a fistulous tract with an anal opening, contrast medium may be injected through the fistula into the anal pouch.

A lateral view of the abdomen also should be taken as this will help to estimate the thickness of tissue between the rectal pouch and the anal skin. If there is no sufficient gas in the intestine to cause distension of the bowel, erroneous localisation of the lesion may result. At the early ages of 4 & 8 hrs. of the child there is no gas in the large intestines. Even if there is a little gas, it is not able to push through the sticky meconium. Hence about 20 to 24 hours time should elapse before this investigation is done. The child should be held head down for at least 5 minutes, but preferably for 10 minutes with the thighs extended. Only then a correct interpretation of the skiagram can be done. Contrast medium should not be given by the mouth and it is contraindicated as there is already an obstruction. Apart from this, in the new born infants, small intestine obstruction like duodenal atresia and atresia of small intestine etc. can be made out. Atresia of small intestine is very difficult to be differentiated from obstruction due to other causes such as meconium ileus and volvulus. Opaque medium by mouth for diagnosis should be avoided and barium enema is preferred to determine whether the gaseous distention is confined to the small bowel. This will also help in locating the caecum for evidence of

malrotation or other manifestations of volvulus. The atresia is shown by the marked gaseous distention, the dilatation being localised to the segments of the intestine proximal to the lesion.

Meconium ileus is a congenital anomaly in which meconium becomes inspissated in the g.i. tract and causes intestinal obstruction. This is said to be caused by congenital stenosis of the opening of the pancreatic duct. In meconium ileus the gas becomes initially mixed with the abnormal meconium in the dilated lower ileum and instead of clear structureless areas of translucency of air, there is a mottled appearance due to small bubbles of air in the meconium. Atresia of small bowel may be associated with perforation of a loop of intestine resulting in peritonitis. Perforation usually occurs in foetal life and it is known as meconium or foetal peritonitis. It is characterised by the presence of multiple, fine, discrete calcified depositions scattered thorughout the abdomen. The calcification may be linear and localised or scattered as multiple diffuse stipplings throughout the abdominal cavity. There is usually atresia of terminal ileum with partial rotation of the large bowel.

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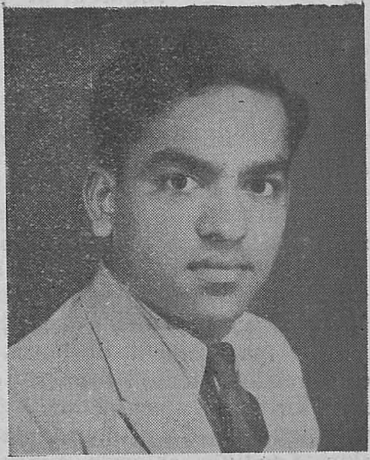

BY

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In the course of history, professional as well as secular, epoch-making events cause equally epoch-making changes and reversals. World war II which shook civilization to its very foundations brought about many changes—national alignment and international policies in the individual lives of all the people involved. No less has it altered the map of the surgical world. One of its direct results has been the shift in emphasis from the surgical practice of old to that of new. In this respect it has realigned theory and practice.

Another factor which entered into this revolution in both theory and practice was the battle field experience which surgeons from all the nations which had been engaged in combat brought home to contribute to civilian practice. Even truer today than in sixteenth century is the dictum of Amrose Pare—" War is the greatest school of Surgery ". If we look back at the fateful August in 1945 and compare it with what surgeons have been doing in the immediate past even the most sanguine will be astonished.

Treatment of Surgical Infections :—

The introduction of sulpha drugs and antibiotics (Penicillin and related compounds) has completely changed the out look on surgical infections. Surgeons realised earlier just how far the " Wonder Drugs " could help them or how dangerous they could be if used unwisely. Antibiotics therapy is valuable in surgical practice primarily as a supporting or adjunctive measure. It is especially useful in elective surgery of contaminated areas such as the gastro—intestinal, respiratory or genito urinary tracts, in traumatic wounds which have been contaminated or in any surgery which demands the installation of an indwelling drain or catheter.

Where surgical emergency arises in the presence of severe infection already established such as an acute naso pharyngeal condition in which the throat and nasal passages must be operated upon, penicillin or related antibiotics have proved of great assistance. However they should be chosen on the known bacterial flora and should be given in time. Topical application to contaminated wounds is seldom necessary and the routine use of antibiotics after elective surgery is now by many not often considered needful, except possibly after operations upon central nervous system and thorax. However, I believe, it is always best to err on the side of safety. If a surgical infection is on or in cellulitis stage, a correct clinical diagnosis of course is of prime importance. A bacteriological smear and culture should always be made so that the best suited antibiotics to meet the type of organisms found may be employed. The earlier some what hit-or-miss application which often evoked serious even occasionally fatal reactions has been largely replaced by thorough

diagnostic investigations and thoughtfully planned administration.

Advances in Management of Wounds aud Burns :—

Surgical treatment of external injuries such as superficial wounds burns and frostbites has greatly advanced during the past decade largely with the aid of the antibiotics. It is now generally agreed that in the management of burns the closed compression method formerly employed is superior to the open method. The modern technique consists of immediate administration of sodium chloride either through a needle into a vein or by the insertion of a small polyethelene tube through which the saline solution may be administered continuously for as long as it seems necessary. Plasma and whole blood are also given freely as indicated by the depth of the burns. Shock is the chief concern when the patient is first seen and its alleviation resorted to promptly. Long time remedial treatment such as skin grafting must usually await the patient's reaction to emergency measures. Plastic reconstruction measures made great advances during and after the first world war. But the increase in automobile and industrial accidents has kept plastic surgeons busy devising new and better methods of avoiding scarring and facial disfigurement by many stage operative procedures.

Operations for Relief of Pain :

Conspicuous among progressive surgical procedures are those performed solely for the relief of pain, with no possibility of permanent cure. But a short time ago the only help offered the sufferer from intractable pain, in malignancies and other terminal conditions was by ever increasing doses of drugs such as Morphine or similar sedatives, in most instances leading to permanent drug addiction. The value of Anterolateral chordotomy for the relief of pain in the trunk, pelvis and legs has long been established. In carcinoma of the breast, there is still strong prejudice against this procedure not only as to its actual value but also in regard to the dangers involved. J. C. White and co-workers analysed and concluded that this is the best operation for the relief of most varieties of unilateral pain, situated below the first thoracic segment but added that they are not sure of its effectiveness when the brachial plexus is involved. A writer in the periodical surgery appearing in 1953 demonstrated that high cervical chordotomy could be carried out at one stage without fear of respiratory difficulty, though some earlier observers had found the procedure unacceptable as it interfered with respiration.

Unilateral prefrontal lobotomy for the relief of intractable pain has also found a number of adherents during the years just passed. Scarff and his colleagues at the Neurological Institute, New York, performed this operation on 58 individuals with "Good" results in 38. (66 per cent.) Most of these patients suffered from inoperable carcinoma and the good result meant that the patient no longer voluntarily complained of pain nor required regular doses of narcotics. The remaining 34 percent were either partially relieved or would admit no relief whatever and detailed studies carried out on many of these patients both before and after operation established the fact that no significant impairment of intellect or personality followed the unilateral lobotomy. One important observation was that the cure of drug addiction due to pain was greatly facilitated by unilateral lobotomy. All narcotics, it was found, could be stopped following the operation without any of the customary symptoms and signs of withdrawal. The wide variation in the effectiveness of the procedure under apparently identical conditions led these authors to believe that the operation imposes a relative rather than an absolute barrier between Pain Reception and Perception at the conscious level. Unilateral prefrontal lobotomy relieved the pain (mostly from inoperable carcinoma) of half the patients reported by Rowe and Moyar in 1950. Their experience suggested that a complete unilateral leucotomy is more effective than a medical incision which does not include the superior lateral quadrants. The most

impressive advantages of the unilateral operation are the minimal surgical risk and the absence of marked post operative mental changes.

Surgery in the New Born :—

There is no doubt that longevity is on the increase and our great profession is playing a major role in bringing this about. Abdominal surgery is now frequently attempted and often successfully carried out on the new born. Though the mortality is high, primary enteroanastamosis or gastero enterostomies for congenital small bowel obstruction has succeeded in enough instances to offer help for the future. The surgeon should not be in a haste to operate before the infant can be properly prepared for it except in intestinal lesions of strangulatory type. 12–24 hours may be allowed usually for such preparation but the possibility of improving the general condition will have to be carefully weighed against the dangers of delay. Primary large bowel anastomosis gives poor result in the treatment of young adults and infants. Most surgeons prefer to do a preliminary colostomy. It is also advised by surgeon specialising in pediatrics that infants with Omphaloceles will prove better risks if the repair is done in two stages unless the defect is very small. Lastly it is important to know the interest in the separation of conjoined twins which was stimulated by several attempts recently made. Such surgery offers a challenge to the anaesthetist, the cardiologist and the neuro-surgeon. Even the smallest degree of success marks an advance in what has been so far looked upon as surgical impossibility.

Geriatric Surgery :—

Care of the aged has been a physical and social problem since a long time. Calling it " the Science of Geriatrics " is merely dignifying it by a new and imposing name. There is no doubt that the incidence of carcinoma is increasing and many statisticians attribute this rise to the fact that more people are living in this " Cancer Age ". This used to be defined as the " forties and fifties " but now it is not uncommon to have cancer patients beyond 60 or 70 presenting a still greater challenge to the surgeon.

The progress of cancer therapy has been so great during the past two decades that I can speak of it only in general terms. The benefits of modern surgical methods should never be denied to the elderly patients suffering from a malignancy on the basis of age alone. Anglem and Bradford had presented a statistics that in patients over 70 years of age who had undergone major surgery for carcinomas, operative mortality was 15.12 percent only, comparing favourably with those of much younger patients. Further reduction in overall mortality will depend in part on the elimination of useless exploratory and palliative procedures. This can only be dispensed with by always making a most careful and accurate preoperative evaluation.

A lesion seen frequently in an elderly man which has received considerable notice from surgeons is carcinoma of the oesophagus. Routine Oesophagectomy does not show many records of 5 years survival as yet operative mortality rate in carcinoma of the lower oesophagus and cardia was 11·6 per cent as compared to 24·3 per cent when the carcinoma was in the middle of the oesophagus. It seems signi ficant thet death is not due directly to the lesion itself or even to the immediate result of the surgery but rather to cardiac failure. This perhaps has been a contributing factor in the attention lately directed to a study of cardiac arrest under anesthesia and the methods for its treatment and prevention. A great deal has been said and written about it. Recognition of this danger earlier helps to minimise the damage to the brain which interrupts the respiration even when it is not immediately fatal. The causes of sudden " stand still " of the heart are either diseases of the ventricular specific tissue or depression of the remaining cardiac elements by drugs or aneasthesia agents. Ventricular fibrillation can be treated only by electrical defibrilla-

tion. The management of cardiac arrest is generally accepted to be immediate massage of the heart after surgical exposure to bring back the blood supply to the myocardium and the brain. It is claimed both fibrillation and cardiac arrest can be prevented by frequent small doses of atropine.

Another aspect of the involvement of the heart in the apparently unrelated conditions is the observation made in recent years that gall bladder disease particularly cholithiasis may have previously been manifested.However, there is no agreement as to whether gall bladder disease actually increases the pathologic process in the coronary vessels. Some surgeons are of the opinion that it can, concluding that an acute gall bladder attack may through a vaso vagal refex precipitate acute coronary insufficiency in those patients who have pre existing coronary disease. Recent advances in the technique of cholecystectomy and an improved understanding of the physiology and pathology of the biliary tract are now doing a great aid to both cardiac and biliary surgeons in diagonosis and treatment.

All surgeons realise that despite the impressive progress already made much remains to be learned about the eternal puzzle, the human machine ; how dim and uncertain even today, are some of the pathways that connect its many parts and their diverse functions. The whole truth perhaps will not be known in our time but of one thing we can be sure that however demanding the challenge may be, Surgeons will be among the first to answer it.

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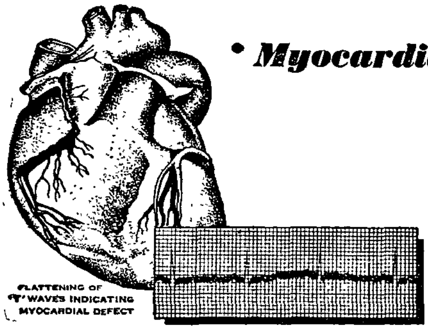

• *Myocardial Damage*
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Nursing Care of a Patient after Partial Gastrectomy

By

Miss P. M. LEWIS,

Nursing Tutor, Govt. Stanley Hospital, Madras.

On July 26th, 1957, a female patient, Thayarammal by name aged 40 years was admitted in the Wilson Ward complaining of pain in abdomen and vomiting since a month.

Past History :—

Nil definite.

Family History :—

Hindu, married, belonging to the middle class. Husband is a mazdoor. Children three, alive.

Present Complaint :—

Started with vague abdominal pain and occasional vomiting-not related to food. But vomiting takes place generally two or three hours after food. No history of haematemesis, maelena, no loss of appetite ; heart burn and acid eructations negative.

On Examination :—

A lump in the epigastric region 3″×2″—mobile, firm, dull on percussion—visible peristalsis positive, nil else abnormal.

Investigations done :—

3—8—57

Urine	...	albumin nil.
	...	Sugar nil.
Motion	...	Ova and cysts nil.
B. P.	...	138/106
Haemoglobin	...	75%
Blood urea	...	32 mgm%
Blood group	...	'B'
Blood picture	...	Normal limits.

Barium meal x-ray report shows filling defect in the pylorus. Provisional diagonosis was made as carcinoma stomach ? It was decided to operate on the patient and operation was performed on 5—8—57 by Dr. G. Atma Rama Rao, M.S. There was a growth in the pyloric region. Partial gastrectomy was done on the patient under gas & O_2 and the patient was brought back to the ward at 12–30 p.m.

Preoperative management :—The patient was on bland diet for 5 days prior to operation ; gastric lavage was done from three days prior to the operation and Rectal glucose saline one pint B.D. was given. The patient was kept at rest as far as possible. A day prior to the operation complete skin preparation was done with aseptic methods. Gastric lavage was given at night and in the next morning. Soap and water enema was also given H.S. and C.M.

On the day of the operation the skin area was prepared with great care as before and the area was covered with a sterile towel. Nothing by mouth was given except mouth washes. Nails were cut short, hair combed and tied, all the jewels

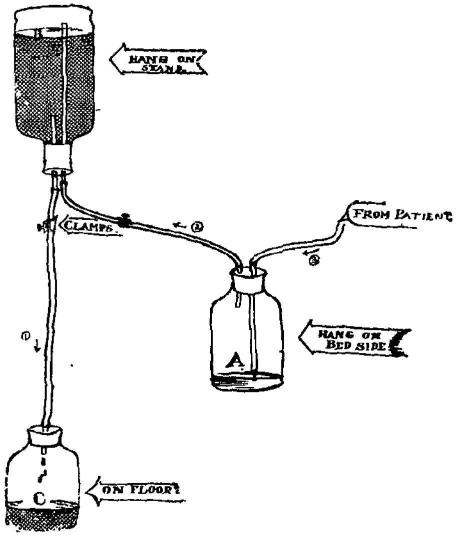
removed and a clean gown was put on the patient and she was kept ready to be taken to the theatre.

Ryles tube was passed through the nose into the stomach and gastric contents aspirated. The tube was kept in position. The temperature, pulse & respiration were within normal limits. But the patient was slightly worried. She was reassured and was sent to the operation theatre on the stretcher trolley at 9-30 a.m. after voiding urine.

Injection of morphia 1/4 gr and atropine 1/100gr were given intramuscular.

Post operative management—The patient was received in the ward at 12-30 p.m. She was gently placed in recumbent position in a warm bed with her head turned to one side to prevent the tongue falling back and to avoid the risk of vomited matter entering into the trachea. Every attempt was made to prevent shock. One bottle of 'B' group blood was started in the theatre. A bed side report was maintained wherein half hourly pulse and respiration were recorded to detect any signs of deterioration.

The instructions were that the patient should have :—



WANGENSTEEN TUBE
for suction.

1. Continuous suction.

2. I. V. 5% glucose saline to be continued till further orders.

3. Nothing by mouth for 48 hours.

4. Fowlers position after recovering from general anaesthesia. On return from Operation Theatre the pulse rate was 182 & Resp. 24 per minute. Pulse—volume and tension—fair. Second bottle of 'B' group blood was given at 2 p.m ; at 9 p.m. B.P. was 115/90 The glucose saline was also continued. Patient was given a mouth wash and her back attended to, to prevent bedsore. She was advised to take a deep breath occasionally. She was given morphia ¼gr. at 9 p.m. to combat restlessness and she had fairly good sleep till 3 a.m. Urine not passed B.N.O.

6—8—57. The total output by the continuous suction was 3 ozs. The fluid was coffee ground in colour. She was catheterized at 10 a.m. and 16 oz of urine drawn and recorded. Oral hygiene of the patient attended to. Temperature, pulse, respiration recorded 4th hourly, but half hourly pulse respiration record continued. Pulse volume, and tension improved. She complained of slight pain, but had no vomiting or distension. I.V. glucose saline and the suction continued.

Antibiotics:—Crystallin pencillin G. sodium 5 lacs given B.D. and streptomycin sulphate 1 gm daily. Breathing exercises and changes in position in order to mitigate lung complication. Sips of sterile water were given to moisten the tongue and lips. The temperature was slightly elevated, general condition fair. Patient had a fairly good sleep. Tr. Benzoin inhalation was ordered and the same was given.

7—8—1957. The same treatment continued. Temp. 101. Cold compress applied to the forehead. Nourished on small quantities of glucose water-½ oz. every two hours. Continuous suction was stopped. Aspiration was done every two hours. The colour of the fluid was greenish. I.V. glucose saline was continued for one more

day—Urine tested. nil abnormal. Patient helped to sit up in bed to encourage early ambulation. No sedatives given. No distension of the abdomen. Patient slept fairly well. condition fair.

8—8—1957. Temperature normal. Patient looked cheerful. I.V. saline and aspiration continued. She was nourished on whey and albumen water 1 oz. every hour alternatively. Personal hygiene attended to. Pulse 100. B.P. 124/80. No oozing present, urine passed. B.N.O. condition same. Antibiotics continued.

9—8—1957. Temperature normal. Glycerine enema was given in the morning with a fair result. Patient passed flatus and urine. Nourished on increased quantities of fluids as citrated milk, orange juice etc. 2 to 4 ozs. were given at a time.

10—8—1957. Patient was given frequent mouth washes and nourished on milk. Temp. 98.4, Pulse 98, Resp. 24.,B.P. 124/80. No complaints. Patient comfortable and felt better. Relatives visited the patient which made her more encouraging. She was made to sit down for a longer period.

11th to 14th. Same treatment continued.

On the 14th antibiotics stopped. She was put on soft milk bread diet and was asked to move about within the ward.

17—8—1957. Sutures removed and wound healed by first intention. She was given rice conjee, double boiled rice with butter milk and she felt much better and happy. No pain, no vomiting.

18th to 22—8—1957. Intake of diet gradually increased. In addition vitamin C.50 mgs, given twice daily. Mist alkaline Belladone Zi t.d.s. multivitamin tablets 2 t.d.s. Protein hydrolysate ½ oz. in a tumbler of milk twice daily since 14th was given. Bowels regular. Micturition normal.

23—8—1957. The patient was discharged from the hospital. The following instructions given:

1. That she should not exert too much.

2. She should have rest for another period of two months.

3. She was asked to report to the Surgeon every fortnight.

4. She was advised to increase the intake of diet gradually and to supplement eggs, milk, greens and vegetables.

5. To avoid spices, chillies etc.

6. In case of any discomfor. pain etc. to report to hospital immediately.

Acknowledgment :—

I am grateful to Dr. G. Atma Rama Rao, M.S., for his permission to send this report for publication in the magazine.

A man had his hands operated and in bandages. When the bandages were being removed he said, "Doctor, when the bandages are removed will I be able to play piano?"

The doctor nodded and said, "I think so."

"That's funny Doc., I could never play before."

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CTF

IN THE EVOLUTION OF SURGERY ....

BY

P. A. SUNDARARAJAN, .

3rd Year.

"Life is short and art is long, the crisis is fleeting, experiment risky, decision difficult ".

The art of surgery in its onward march through the ages has been aided, abetted, polished, protected and improved upon, to make it what it is today, by countless men who pledged their lives to freeing mankind from the bondages of disease. To give a complete account of the vast concourse of them all, in this article, will be nothing less than impossible. But a cursory glance at the lives of a few Surgeons will be full of value and interest.

The history of surgery is probably older than that of medicine. Injury is more dramatic and calls for prompt attention. Primitive man had to hunt his food. Traps, duels and attacks do invariably court danger and cause cuts, injuries and bruises. And in times of need he would have looked up and reached out his hand to the nearest leaf to 'bandage' the wound. Possibly that was the first step towards dressing ever to be taken. And thus the spirit of discovery must have forged ahead and by trial and error broken up the links of the chain of obstacles in the path of healing. After having hesitated to choose a discovery for a start, I have decided to begin with one which has revolutionized surgery. And that is the discovery of the 'antiseptic principle'.

Lord Lister — *Antiseptic Principle and catgut)*—In the preanaesthetic days, "surgery was considered to be butchery". When anaesthesia was discovered, the pain of the operation was no longer there, but surgery was purely a technical one. And the dread of sepsis was the nightmare of surgeons. Healing by first intention was then a rarity.

Hippocrates is said to have used tar and wine for dressing up wounds. When the patient came to thank him, he would say, " I dressed him, but God saved him." The use of wine is mentioned in the Biblical parable of the Good Samaritan. Then we hear of the famous French surgeon who dressed up gun shot wounds with digestive of eggs yolk, oil of roses and turpentine. The routine treatment prescribed then was, " treat wounds made of fire, by cauterizing them by scalding with hot oil ". But Pare' says, "I resolved never to burn poor men wounded with gun shots ". Undoubtedly these substances were antiseptics but the surgeons never understood the underlying principle.

Not to speak of the discovery of anaesthesia, the discovery of the antiseptic principle is the greatest boon to surgery. And Lord Lister was the man behind it. He was born in 1827. He attended a Quaker school and before leaving school acquired some knowledge of anatomy. He was fond of mounting skeletons of small animals and had great liking for natural history. At the age of 16 he passed out from school to university where he graduated B.A. And then he took up medicine and soon after completing his M.B., became a fellow of

the Royal College of Surgeons. Lister was now 26 years of age and got appointed as a supernumary clerk to Syme at Edinburgh. He then readily accepted the post of a resident house surgeon, with no ill feeling or consideration to the discomforting fact that such a post is usually given to a fresh graduate. He then with the help of Syme got appointed as an Edinburgh surgeon. Meanwhile Joseph Lister became attached to Syme's daughter and they were married and the devoted company, understanding and sympathy of Agnes Syme went a long way in paving the path for his discoveries. Three years later Lister occupied the chair of surgery at the Glasgow University.

Now Lister became immersed in serious work and wondered why some wounds formed a beautiful scab and healed so well while some others suppurated. And the work of Louis Pasteur came to his aid and supplied the clue. Pasteur had shown that it was not the air but something in the air that caused fermentation in certain fluids. Lister then construed that suppuration might well arise from the same cause as for the fermentation of wine—the minute organisms or germs ; and thus he got at the truth.

Lister found carbolic acid a useful antiseptic and good at eradicating the agents of sepsis. Later he replaced carbolic acid with heat as an aseptic. Stephen Paget states. " we call the one method antiseptic and the other as aseptic ; but . . . they both are applications of the same principle ".

The indebtdness of surgery to Lister does not stop with the discovery of antiseptic principle alone. The very use of catguts for ligaturing goes to his credit. In those days ligaturing was a bugbear. The surgeon's technique was good and fast. But when healing progressed, the ligature would slip off and suppuration or severe haemorrhage was the invariable outcome. And the ligature itself was a source of irritation. They tried many methods, such as leather and tendon. But Lister blessed Surgery with catgut prepared from sheep's intestines and that has proved irreplaceable

James Syme .... (*Syme's Amputation and knife*)—

James Syme was a notable figure himself besides being connected with Lister's name. He designed a method of amputation that is still in use, though not frequently. In the preanaesthetic days surgery was an accursed necessity. And the simplest and quickest method of performing an operation was best for the surgeon. The standard procedure for an amputation was : a circular amputation which left a tender and irritable stump and erosion of healthy tissues. Disease or injury of foot posed a veritable problem and amputation below the knee was the usual procedure. Syme devised a new operation consisting of an amputation through the ankle joint and removal of the ends of tibia and fibula, and thus he obtained a comfortable stump by making a flap from the sole of foot and the thick ligaments of the heel. Syme employed a knife (Syme's knife) of his own design for his method of amputation and that has become the standard knife in use until this day.

James Marion Sims............(*Sim's speculum and Sim's position*)—

James Marion Sims was born in South Carolina in the U.S.A. He was twenty two when he graduated from the medical college. Soon after, he operated successfully for abscess of the liver. Two years later he removed both the upper and lower jaws of a patient. This was before the days of antiseptics and anaesthesia! Later on, as a surgeon of Alabama, he was called to attend to a woman who had fallen from a horse and suffered from displacement of uterus. He put the patient on her knees and made digital examination through the vaginal route and found the uterus replaced in its original position and hence impalpable. At that very moment the patient was relieved of the symptoms. As she was turned on her back Sims noticed a sudden exudation of air from the vagina. And

thus Sims found that the patient's knee-chest position helped in the replacement of the uterus by allowing the entry of air.

Sims at first used a bent spoon as his speculum to aid in the admitting of air and he also discovered that the left lateral position was equally effective for vaginal examination as the knee chest position.

Spencer Wells .. .. (*Haemostatic Forceps*)—

Spencer Wells had an adventurous career as a surgeon in the army. He used to say that his war service had made him much less afraid of wounds than before. In those days to control bleeding during an operation was an ordeal and the fingers of an assistant came to the surgeon's aid to clutch the cut ends of vessels. And Wells came out with a forceps designed on the basis of the old artery forceps of Lister and the crude "bull dog" of the famous German surgeon. The haemostatic forceps of to-day is just the same as that of Wells' except for the fact that it contains 3 or 4 clutches while the original had only one.

Joseph Gamgee ....(*Gamgee tissue*)—

The employment of the present day Gamgee pad was first demonstrated by Joseph Gamgee. Gamgee took a piece of finest cotton wool and dropped into a tumbler of water. It was found to float. And then he dropped a wad of cotton wool made absorbent by the removal of oily matter and it was seen to sink to the bottom in a few seconds. He repeated the experiment with a piece of ordinary calico bandage. It did not sink whereas a piece of absorbent open wool bandage sank the moment he dropped it into the water.

Thus the gamgee tissue came into existence. It consists of a layer of absorbent cotton wool between two layers of absorbent gauze. This gave both the necessary compression and absorption. Of this absorbent dressing Gamgee said, "the soothing surgical pressure is like that which you interchange with the hand of a lady. Your hand adapts itself to hers and gently presses it wherever it can touch it, but nowhere squeezes it for fear of offending."

Richard Volkman...........(*Volkmann's ischaemic contracture and Volkmann's spoon*).

Richard Volkmann was born in Germany in 1830. He had a brilliant college career at Berlin and in the Franco-prussion war he served as a surgeon general. Volkmann was in charge of a famous clinic called the Halls Clinic. When he took charge, sepsis and hospital gangrene were so prevalent that "no one dared to touch a knife in the surgical clinic!" But Volkmann was a devoted and ardent disciple of Lister. He introduced the regular use of carbolic spray and carbolic lotion. The latter was poured out liberally from gardeners' watering cans. Just as we find in our theatres the slogan, "no one should enter the premises without caps, mask and gown", Volkmann's slogan in his clinic was, "if dirt be unavoidable, let it be antiseptic dirt!" It seems, the surgeons and his assistants wore long rubber boots and channels in the floor allowed drainage!

In 1878 Volkmann discribed his ischaemic contracture. He was specially interested in orthopaedics but he made many contributions to general surgery. He was the first man to excise the rectum for cancer. He instituted the excision of tuberculous joints when the standard treatment till then was amputation. He introduced his sharp spoon using which the diseased bone could be scraped away leaving the healthy parts undamaged.

Hugh Owens.........(*Thomas' Splint*)—
Hugh Owens Thomas was born in 1834 in a family who were for generation bone-setters. His father, an expert bone-setter, desiring his son to have regular medical education had him study at Edinburgh and at the University College, London. Thomas qualified as an M.R.C.S. at the early age of 23.

Thomas set up practice at Liverpool. He treated the poor gratuitously. The

main principle in his treatment was rest "enforced, uninterrupted, and prolonged." During his days excision and amputation were the standard modes of treatment adopted for chronic diseases of joints, though immobilisation in the treatment of fractures was practised. But Thomas applied his principle in these cases of chronic diseases of joints also. He insisted that rest must be applied in such a way as to cause no compression of the diseased part or impairment of normal circulation. With this view, he devised many of the fracture splinters that are still in use. The employment of Thomas' splints brought down the mortality of compound fracture of the femur from 80 percent in 1916 to 7 percent in 1918. Thomas also invented a wrench for reduction of fractures.

Though sparingly built he had an inexhaustible fund of energy and worked from six in the morning until midnight, never taking a holiday. The secret of his success has been attributed to his mechanical ability and attention to details.

Trendelenberg ....(*Trendelenberg's position, test and operation*) —

Trendelenberg was born in Germany in 1844. He had his early medical education at Glasgow, and took his M.D. at Berlin when he was twenty two. Few years later Trendelenberg described his famous position and two important tests, one for testing the potency of the veins in varicose condition and the other for the diagnosis of fractures and congenital dislocation of hip joint.

Tendelenberg's position is mainly used for gynaecological and other pelvic operations. Its value is that the intestinal coils can be packed away from the field of operation, thus giving the surgeon free access to the pelvis.

His reputation as gynaecological and abdominal surgeon was great. He was the first to operate for embolism of the pulmonary artery. His two patients survived 15 and 35 hours respectively. This dramatic operation for pulmonary embolism is known as Trendelenberg's operation. This great surgeon and writer had a long life of 84 years.

George Fowler............(*Fowler's position*)—

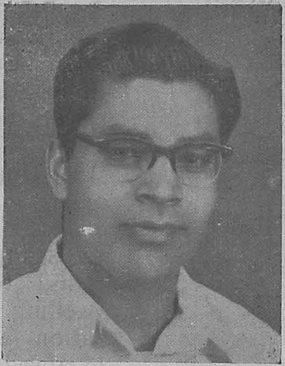
George Fowler was born on Christmas day in 1848 in New York as the son of an expert mechanic. He attended the village school and entered his father's shop as an apprentice.

It is said that when he was called to assist men injured in an accident in the machine shop, he longed to do something for the injured people and restore the usefulness of the affected parts. And his surgical interest is believed to have been aroused thus as an expression of philanthropy. He graduated M.D. at the age of 23 and after a struggle in general practice he got apponited as a residing surgeon in a newly opened dispensary. His reputation as a surgeon spread and he held successive posts until he became Professor of Surgery in the medical school at New York.

About this time Fowler published his reputed work on appendicitis and insisted on early diagnosis and treatment. With the help of his son he devised at the Brooklyn Hospital a particular position for a patient suffering from acute appendicitis. Though famous as an abdominal surgeon, Fowler made valuable contributions to many other branches of surgery. In thoracic surgery he is said to have done the operation of decortication of the lung in chronic empyema. This great surgeon who did so much to relieve the sufferings of patients with appendicitis himself died of peritonitis following the removal of a gangrenous appendix.

.........................The night was once dark, dreary, dreadful and full of despair. The stars appeared and sprinkled the sable skies with hopes. Now the sun has risen and surgery is on its triumphant march, shining on "the sacred ground of sickness and sorrow."

A CASE OF MALIGNANT HAEMANGIOPERICYTOMA



By

S. RAJAGOPALAN,

Final Year.

Vemboo, female aged 16, was admitted on 20-8-57, in Wilson Ward for a complaint of swelling on the left side of mid back of two months duration.

History:—Insidious in onset and of Gradual progress. No history of trauma fever or any pre-existing swelling at the site before the appearance of the swelling, 2 months ago. The swelling had steadily increased in size (and had not at any time decreased in size). There was no pain and no other similiar swelling elsewhere in the body. There was no other complaint except slight cough with scanty expectoration, for the past one month. There were no urinary symptoms, and menstrual history was normal.

On-examination :—Patient was a well nourished girl about 16 years, was not anaemic, not jaundiced, not cyanosed and had no clubbing of fingers.

Locally :—The swelling was in the midst of the iliocostal interval of the left side of the back, its medial margin being an inch lateral to the spinal muscles. It was about 3″ long and $2\frac{1}{2}$″ wide and ovoid in shape. The skin was stretched over it but was not adherent to it. Otherwise the skin was normal. The edge of the swelling was fairly definite but did not show the characteristic "slipping" of a lipoma. The plane of the swelling was deep to deep fascia and Latissimus Dorsi and it was free from the erector spinae. There was no expansile impulse on coughing and no pulsation or thrill felt in it.

There were no signs of inflammation. The swelling was not tender and did not harden under palpation. The surface of the swelling was lobular. There was no pitting on pressure and the consistency was uniformly pseudo-fluctuant. It was not transilluminant and could not be reduced by pressure or posture.

On percussion it was dull and auscultation did not reveal anything.

Axillary glands, on both sides, were not enlarged and both inguinal groups showed a few enlarged chronic septic glands.

Chest wall, lungs and heart were clinically normal except for a few crepitations at the left apex. The spine was clinically normal.

X-Ray chest and spine revealed no abnormality.

B.P. 105/70, urine examination-normal.

A provisional diagnosis of lipoma of the back was made at this stage. The possibility of cold abscess with unknown primary could not be ruled out on differential diagnosis and the rare possibility of a haemangioma was also kept in mind. It was decided to aspirate the swelling and proceed subsequently with exicision if no pus was drawn.

23—8—57. With morphia $\frac{1}{4}$ gr and atropine 1/100 gr as premedication, pentothal induction and endotracheal gas and O_2

maintenance, the swelling was aspirated and frank blood was drawn. The aspiration was repeated with the same result. A transverse skin incision was made over the swelling which was exposed on incising the Latissimus Dorsi. It was found to be a neoplastic swelling with area of degeneration but fairly well localised. The entire swelling was removed with the adjacent soft tissues from the lower 2 ribs to the iliac crest. The wound was closed in layers after securing haemostasis.

23—8—57. 8 p.m. patient's general condition good. No oozing from the wound, Morphia ¼ gr. I.M.

24—8—57. Penicillin 5 lacs I.M. bd.

25—8—57. Pencillin 5 lacs I.M. bd.

31—8—57. Sutures removed. The wound healed by primary intention. The patient had been afebrile throughout her stay in the hospital.

1—9—57. Patient was discharged from the hospital with the instructions to report back after ten days.

The pathology report of the swelling on microscopic examination was Malignant Haemangiopericytoma.

10—9—'57 :—The patient was readmitted in Wilson Ward. On examination the scar was healthy except for its uppermost part near the 12th rib where a small recurrence was seen. A swelling had developed here about 1½"x½" in size freely mobile, firm with definite edges and other physical features exactly similar to the original swelling except that it was adherent to the scar. The cardiovascular and respiratory system were normal.

A diagnosis of recurrent malignant hemangiopericytoma was made and the following investigations were done :—

Total white count—5800/cmm.

Differential count—P54 L40 E5 M1.

Total R.B.C. count—4.2 millions/cmm.

Hb.%.................80 (Sahli's).

The patient was referred to the Barnard Institute of Radiology for Irradiation Therapy.

She was given a course of 20 deep X-Ray exposures at 200 K.V. 12 M.A. (40/10) for 20 days between 25—9—'57 and 21–10–'57.

22—10—'57 :—Patient's scar looked clinically normal on inspection and palpation except for a small nodule at the site of recurrence. Patient was discharged with instructions to report again after one month or if swelling recurred or if she had any cough or expectoration or any other complaint within a month.

This case is a good example to show that though our clinical diagnosis of simple swellings is quite often correct, a few cases can be diagnosed only by biopsy. The routine use of excisional biopsy is necessary to reveal rare conditions like this and only a teaching institution could have diagnosed this case and given to it the post-operative course of irradiation, though it is too early yet to talk of the results of treatment for this particular case.

Malignant Haemangiopericytoma has been described by Schmidt in 1937 as Gemmangiomata. Haemangiopericytoma is a benign tumour arising from the pericytes of Zimmerman of the capillaries.

This has been demonstrated by tissue culture. Very rarely it shows tendency for metastasis. Clinically it has no charecteristic appearance. Usually it is a circumscribed nodule, small in size and occasionally red in colour.

It begins as a small inconspicuous nodule and grows very slowly. Features of malignant changes are as usual for any malignant tumour.

Microscopically the tumour consists of groups of endothelial lined tubes with a supporting network of reticular fibres surrounded by rounded cells, and the rounded cells become elongated in the periphery. Poorly differentiated myofibrils may be found. The cells may be many-layered or rarely single-layered. No elastic fibres are formed. Malignant charecteristic is the invasion of the lumen by these cells. Microscopically these features have to be differentiated from the following conditions :—

I. Glomus and Glomus tumours : The haemangiopericytomas lack the organoid features of these encapsulated complex neoplasms and the fine nerve fibres.

II. Haemangioendotheliomas : Charecteristics of these tumours are, (1) appearance of heaping inside the lumen of vessels, and (2) the cells being flat endothelial cells and not the round or spindle shaped pericytes. Tissue culture has demonstrated the differences between the pericytes and endothelial cells very clearly.

Acknowledgement :—

I thank Dr. G. Atmarama Rao, M.S., professor of surgery, Stanley Medical College and Surgeon, Government Stanley Hospital, Madras, for his kind permission to report this case from his wards.

Reference :—

Stout and Murray, Annals of Surgery 1942—116—26.

Howlers from the Fresher's answer paper

(*certified genuine*)

Heart Sounds :

There are two sounds heard when the heart beats. They are called " lub " and " tub ". Cardiologists are of opinion that there is also a third sound. But there are great confusions even among the greatest cardiologists in the world today and therefore we need not bother about it.

The sounds can be heard by electro cardiogram method by placing one of the electro cardiograms inside the pharynx.

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Inositol	...	50 mgm.

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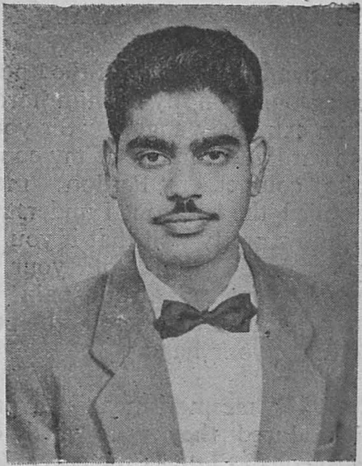
SURGICAL ANAESTHESIA AND HYPOTHERMIA



BY

V. GOPAL,

4th Year.

"The night opens the flowers in secret and allows the day to get thanks."

Surgical anaesthesia which has given surgery its present status (though of course along with asepsis,) is taken as many good things in life are, as a matter of course. One is reminded of the light that has been silently burning behind his back only when it is put out. And only the occasional anaesthetic accidents should awaken us to the realisation of its presence. A glance at the pages of the past will suffice to make us acknowledge with thanks anaesthesia which has "smoothed out for ever the deepest furrows in the knotted brow of agony" on the operation table.

Aneasthesia in surgery, as we understand it to-day is surprisingly only a century young; for, "surgery" has been practised ever since "God caused a deep sleep to fall upon Adam," and while he slept "took one of his ribs and closed up the flesh thereof." The generations that followed Adam were not as fortunate as their forefather when they underwent operations like amputations, Caesarian sections, lithotomy, and even trephining, though probably to have an outlet for the evil spirits to escape!

It is stated that primitive people consider it a shame to submit to pain as evidenced by the customs of the aborigine of the present day. A native adolescent in a ceremony initiating him into manhood has been found to have a perfectly normal pulse when his incisors were knocked out by a monolithic dental extractor! But there is certain evidence to show that attempts were made very early to make the 'operation' a painless ordeal. And it goes to show that the apparently ruthless and barbarous 'surgeons' were indeed benefactors prompted to 'surgery' by the desire to alleviate their fellow men of their suffering, be it a stone in the bladder, ulcer on the leg or spirits in the skull. What appals one more are the early attempts at anaesthesia itself.

Cerebral concussion by a blow on the scalp was found useful in rendering the patient quiet for a painless operation. Bleeding the patient till he is shocked was another common procedure practised as late as the 17th century. Asphyxiation especially for circumcision of children was popular.

Anodyne effects of hashish (opium) and mandragora (belladona) were recognised very early but the dosage of the various preparations was empirical and the patient was either drugged to death or insufficiently drugged. Alcoholic beverages were freely used and perhaps most successfully.

The following attempt at anaesthesia is in a class by itself. "A surgeon in Napolean's army was treating a colonel with a bullet in his foot. The convulsions and

spasms interfered with the operation. The surgeon promptly hit him hard which made him extremely angry. " Sir you have taken cowardly advantage of my condition," said the colonel. " Pardon me, colonel," replied the surgeon, I understand you, and I know pretty well that if you were insulted you would think of your honour and would forget all about pain. The operation is over and here is the bullet. Please give me your hand !"

After mesmerism and hypnotism were introduced they were widely employed by surgeons as late as the early 19th century.

Whatever anaesthesia the patient received the surgeon depended upon the " delicacy of his touch and on the natural toughness of his patient " to bring his sufferings to a minimum. Speed was his by word. Lister is said to have placed a limb on the floor 30 seconds after taking the knife. Astley Cooper performed lithotomy in 60 seconds.

The favourable wind wafting mens' thoughts towards (inhalation) anaesthesia blew in the dawn of the 19th century which saw the development of pneumatic medicine, which followed the experiments on the ' factitious airs ' by Priestly, Lavoisier Davy and others. Amongst the gases and vapours that were used, Nitrous oxide, Carbon dioxide, Oxygen etc. were popular.

The exhilarating effect of nitrous oxide and ether vapour was soon noticed and the ' harmless entertainment ' of inhaling these gases spread. The poets Coleridge and Southey were among many who took sniffs at Nitrous oxide. The anaesthetic property of Nitrous oxide was not missed by the shrewd Davy, who, unstressed among inclusions drawn during experiments on the gas, states that " Nitrous oxide appears capable of destroying physical pain and hence could be used with advantage during surgical operations in which no great effusion of blood takes place."

But the man who did set the clay on the wheel did so by accident. It was in 10—12—1844 that Wells foresaw a " new era in tooth pulling " He was among the spectators in Hartford Connecticut who were amusing themselves watching volunteers inhaling Nitrous oxide. Samuel Cooly, one of the volunteers, happened to frighten the burly men who were at hand to protect the spectators in case a volunteer turned violent and they fled. When the scuffle ceased and Samuel came to himself, Wells observed the bruise he had sustained and wasn't slow in grasping the significance when Cooly told him that he noted the bruise only after they were pointed out to him. Cooly had to be wounded before countless could be treated painlessly.

Unfortunately Wells failed to convince or rather the medical men in Boston, the medical capital of New England, would not be convinced of the effects of Nitrous oxide, though a tooth was extracted in their presence, for, as the bladder of Nitrous oxide was removed soon the excited patient protested loudly though not from pain, as he said later. It was left to Morton, who had witnessed this demonstration, to prove that inhalation anaesthesia was ' no humbug '. He anaesthetised a patient with ether for an operation for a tumour in the neck by Dr. Warren in the famous ' Ether Dome ' in the Massachusetts General Hospital.

Nitrous oxide was reintroduced in New England in 1862 by Cotton, the man who had arranged the ' demonstration by Cooly and others'. With the evolution of the apparatus for inducing anaesthesia, Nitrous oxide establised itself as an anaesthetic gas.

James Young Simpson, Professor of midwifery, fled from his profession earlier unable to bear the sight of the sufferings of his patients to become a clergy man. But he came back to introduce chloroform as an inhalation anaesthetic. But the toxicity of chloroform greatly limited its use,

Strangely enough, men were not favourably disposed towards anaesthetising

patients before operations. It was considered immoral to render a person unconscious. The cartoons indicate the sarcasm which it met with. Religious scruples had to be overcome. But the clear stream of reason led men in the right direction.

The concept of local anaesthesia had its origin in ancient time. The application of cold, pressure on nerves, rubbing of herbs and leaves were resorted to. But local anaesthesia made a fundamental advance when the hypodermic injections were tried, but their success was due to general rather than any local effect. Local anaesthesia took long stride with the introduction of cocaine in 1884. In fact its ' history became the history of cocainization '. The various synthetic products related to cocaine have revolutionised the local approach to surgical anaesthesia. Though it can never monopolise anaesthesia, its role in minor surgery. and surgery on those who cannot stand a general anaesthesia is invaluable. Spinal and Epidural anaesthesia are the result of the extended application of the local anaesthetic principle.

It is interesting to note that music lends its helping hand to the modern anaesthetist and patients. Music as ' an anaesthetic agent ' was prescribed by Galen as an antidote against the venom of snakes and scorpions ! We are all familiar with the spell of the lullaby sung by the mother rocking her baby to sleep. Depending upon the mental, physical and musical make-up of an individual, music has been successfully tried as a preanaesthetic medicament, and during the operation it has been found that the amount of gas required is less if through earphones the patient hears subconsciously his favourite melodies.

A recent trend in anaesthesia is towards hypothermia. Cold derived from ice and salt have been utilised to benumb an area for operation. One is familiar with the anaesthetising action of the ethyl chloride spray. But hypothermia, apart from its anaesthetising property, has been found to render the patient resistant to haemorrhagic shock, decrease his cardiac activity and reduce the oxygen consumption of tissue without incurring an oxygen debt. The anticoagulant effect of cold lessens the danger from thrombosis. These properties have been employed in conjunction with the general anaesthesia in operations which require a temporary interruption in circulation, whether central, cerebral, renal or hepatic. It also helps the debilitated and infants and children undergo major surgery more safely.

Moderate hypothermia is usually employed, the temperature being brought down to 28–30°C, at which the B.M.R. is halved. At this temperature the vena cavae can be clamped for 7½ minutes without ischaemic brain damage.

The induction of hypothermia is by no means easy and simple, but has been safe at expert hands. A brief account of the process involving central occlusion of circulation may be illuminating. The patient receives premedication with scopolamine and Mepedrine or Barbiturate. Nitrous oxide or cyclopropane is administered an hour after intravenous thiopental. A poly ethylene catheter introduced into an artery helps to record the low blood pressure. The ordinary sphygmomanometer cannot be used. A ' telecor ' introduced into the oesophagus records the temperature there, which has been found to be more reliable than mouth or rectal temperatures. It also

carries leads connected to an electro and phono cardiao graphs. An electro encephalogram shows the electrical activity of the brain. The waves disappear when the blood supply is cut out and the anaesthetist gives a sign of relief when the normal pattern appears an hour or so after the circulation is restored. Artificial respiration is carried out by a mechanical ventilator or by other means. The patient with the leads and tubes and telecor is immersed in water to which ice is added a little later. In 30-90 minutes the temperature comes down to 33° C. A water jacket helps to maintain and regulate temperature and rewarm the patient. Perivascular induction of hypothermia involving transfusion of cooled blood has also been tried. Ventricular fibrillation, a real danger in hypothermia is prevented by infiltration of the epicardium about the superior arterio caval junction with 1% procaine or lignocaine. The venae cavae are clamped. Cardiac standstill is obtained by reducing thc temperature of the heart suitably by perfusing the aorta with cooled oxygenated blood. After the operation is over the patient is rewarmed by circulating warm water through the jacket.

Anaesthesia, from its eventful infancy has not lagged behind the advances made in other fields. Though at first its administration was found to be fool proof, it is no longer relegated to the junior medical students and nurses. Following professor John Snow, the first professional anaesthetist, has been a stream of specialists who formed an intergral part of any surgical team.

New gases and vapours were introduced. Basal Narcosis proved a boon to the patients. The introduction of the endotracheal tube was a triumphant episode. Its use cannot be under estimated. Intravenous induction of anaesthesia became a welcome prelude for the inhalation anaesthesia.

Inspite of the vast knowledge gained about the anaesthetics, the ideal one has not been found yet. But let us not " throw the shadow before us by carrying the lantern on our back." The search for the ideal anaesthetic, pleasant and easy to administer, free from all ill effects, is still on. Some day some one will stumble upon something that will enable the patient to awake after an operation as from ' a deep sleep '.

The worried husband phoned his doctor at 3 A.M.
" Would you rush over ? My wife has appendicitis, " he pleaded.

" Impossible, " said the doctor reassuringly, " just give her some carbonated soda and she'll be all right."

" But Doctor, I tell you this is very serious. Please come over."

" Now look, Mr. Phillips, three years ago I operated on your wife. I took out her appendix. Ever heard of any one having a second appendix ?"

" Doctor, Have you ever heard of anyone having a second wife ?"

PHYSIO-THERAPY

By

K. SRINIVASA MADHAVAN, B.A., DIP. P. ED., A.M.I.R.E.,
Physical Director, Stanley Medical College.

Physio-therapy is a fascinating subject and deserves much better attention and application than it has obtained in India to-day. Physio or physical therapy makes use of all those external agencies that go to manipulate physically the human body. Massage in its varied forms, application of heat by means of modern short wave generating electronic machines whirlpool baths, irradiation by means of electric lamps and x-ray apparatus foot and hip baths all come under the scope of Physio-therapy. Rehabilitation exercises that seek to educate and restore paralysed limbs also come under this head.

The general medical practitioner in India gives little or no attention to physio-therapy. A number of quacks and charlatans operate from Kanyakumari to the Himalayas just to eke out a precarious living by calling themselves masseurs. This is also due to the very intimate nature of physio-therapy that it is very embarrassing for any cultured person to take to it. So much so that physio-therapy has come to mean only diathermy irradiation and whirlpool baths provided in the big hospitals of India to-day.

In India almost every one, rich or poor, believes in oil baths and massage. In malabar the ayurvedic physicians boast of their famous system of massage (called Navara Kizhi) and claim to send in 8 measures of gingelly or coconut oil into the body through the skin by rubbing, and finally make out those 8 measures of oil by massage. Of course this is very absurd as we all know what a wonderful protective barrier the human skin is even against micro-organisms, not to speak of molecules of oil. Ayurveda prescribes various oils for massage of the scalp and the body. All these of course depend much on the peripheral nervous system and the impulses arriving at the cerebral cortex. Some of them, like oil baths tend to become habits and the much of the individual's reaction thereafter depends only on these habits and the attitudes directly traceable to them. The physician must recognise these factors and prescribe accordingly.

Unfortunately our knowledge of cutaneous sensation is very poor. But for the excellent work of Pacini, Meissner Krauss and others we would have been nowhere. The plentiful distribution of corpuscles of Pacini on the tips of fingers enables us to distinguish many things blind folded and forms the basis for teaching Braille to the Blind. Much more exact knowledge of these corpuscles is necessary as much of human depravity would also be traced to these finger tips.

In short, cutaneous sensations of touch, pain, reactions to heat and cold and muscle and tendon sensations (muscle spindles in muscles and organ of golgi in tendons) must form the basis of Physio-Therapy. Of course there is also some truth in the effect of the various forms of massage on the blood and lymphatic circulation, but I am afraid, primarily it is the nervous mechanism that must take the precedence. In this connection it may not be out of

place to point out the work of the French professor Leriche. He reports that he had occasion to explore surgically the Tibio-tarsal ligaments and found them intact. There was no bloody infusion except in the areolar tissue about the ligament. Working on the pathological physiology of the joints, he came to the conclusion that the ligament and joint capsules are rich in nervous tissue and that the symptoms of a sprain particularly the pain and loss of function can be completely relieved in a few moments following injections of novo-caine.

The time has come for the general medical practitioner not to depend merely upon chemo-therapy. He has to take into consideration the human being as he is with his habits, attitudes and emotional set up. Human emotions too have greatly developed due to extraneous agencies like literature and the talkies. The doctor must unlike the politician utilise human emotions for the good of the humans themselves. True, our knowledge of the nervous system is not much. Side by side with the development of the association centres, the emotional centres also have kept pace. This makes all human problems very complex and difficult to handle.

The key to human happiness lies in the understanding of the human nervous system in its entirely. Physio-therapy if taken up by the medical fraternity is bound to provide them more and more knowledge and insight into the nervous system. Physio-therapy is supposed to be intended only for sprains, strains or muscle pulls, contusions, fractures, dislocations, infections, inflammations and the like. But physio-therapy can also successfully tackle hysteria, tics and neuroses. The human touch is perhaps the one great single healing factor as best exemplified in the life of Jesus the Christ. Shall it be said of the medical fraternity that they neglected this branch of therapy !

An epitaph

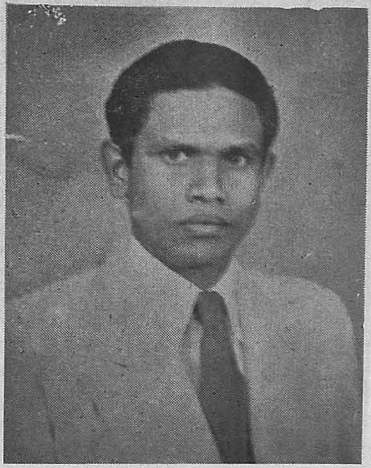
" In memory of my father : Gone to join his appendix, his tonsils, his olfactory nerve, his kidney, his ear drum and a leg prematurely removed by an interne who craved the experience."

Deft Definitions

Etiquette : Learning to yawn with your mouth closed.
Television : Radio with eye strain.
Minor operation : One performed on somebody else.

—*Readers Digest.*

In Memoriam



MR. A. M. M. ABU BUCKER

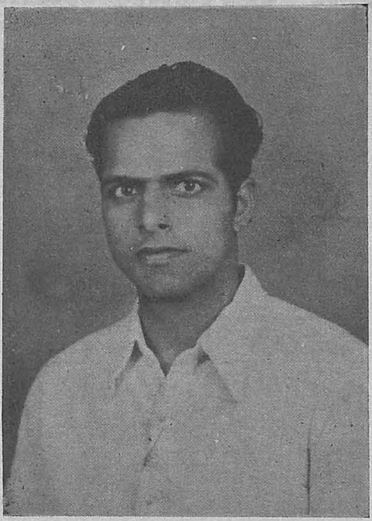
Mr. A. M. M. Abu Bucker hailed from Keelakarai. He was a popular figure among the students of the Stanley Medical College. His lovable personality, the fine qualities of his head and heart, his broad-mindedness, the generous disposition and his friendly nature endeared him to all his friends.

He had a great love for Tamil Language and Culture and his presentation of the portrait of Amarakavi Bharathiar to the S.M.C. Association bears eloquent testimony to his. It was he who gave the fillip to holding competition in instrumental music in connection with the Bharathi Day Celebration, by donating the prizes for the competition.

His death occurred under tragic circumstances and it was a great a shock to his friends. The Students of the Stanley Medical College miss him very much, and he will always live in the memory of the Students of the Stanley Medical College, as a man who greatly loved Tamil Language and possessed rare qualities of generous nature.

May His Soul Rest in Peace

In Memoriam



MR. K. JANARDHANAN NAIR

Mr. K. Janardhanan Nair, son of Sri Krishna Panickar of Shertalay (Marathoor Vattam, Kerala), was born on 4—2—1932. Being the only son of his parents he was brought up with great love and overflowing affection.

He passed his Intermediate examination at St. Berkman's College, Chenganassery. As he prepared for his Intermediate, he also completed the Hindi Vidwan Course. He was awarded several prizes in recognition of his diligence and talents.

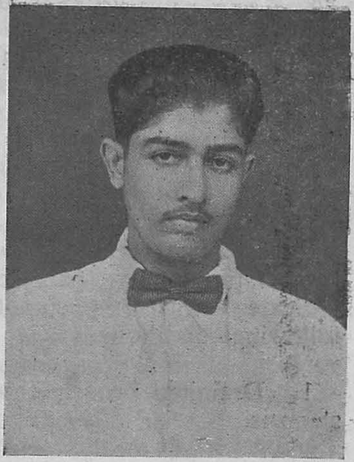
He joined the Stanley Medical College in 1954. Since then his devotion for all activities, Cultural, curricular and extra-curricular, came to be so full and sincere that he became a friend of all.

As he was preparing for his second M. B. examination he had a sudden attack of Cholera; and medical care, however prompt and proper, was of no avail. When "Shrivelled crones stiffen with age to stocks and stones" Fate chose to take him away. And he breathed his last on the 7th of October '57, leaving behind his old parents and many friends to bemoan his premature death.

The heaviness of his loss is no little to wane with time and he will never be forgotten by his dear friends.

May His Soul Rest in Peace.

SURGICAL ASPECTS OF TUBERCULOSIS



BY

G. SWAMINATHAN,

3rd Year.

Of the world's conflicts, there is none comparable in magnitude or fatality to the war between the human being and the germ. On the one side of this conflict is the germ, the powerful enemy, whose name is legion, whose batllions are manifold and whose methods while offensive are complicated and cruel. On the other side is man, living until recent years in blissful ignorance of the dangers that lurk by the way. Fortunately within the citadel of his being are forces of defence as varied and as complicated as those of the invader. Endowed with ability not only to hold its position for years, but also capable of terrifying displays, the tubercle bacillus, unrelenting, uncompromising and indestructible, must rank in the first line of adversaries of man with a toll of death unsurpassed. How far we have advanced in our march in this modern world to combat our enemy, posterity is to judge.

Remarkable and rapid research in recent years has helped us a lot in combating tuberculosis. The new preparation called the purified protein derivative used in place of the old tuberculin in diagnostic work, the detection of tubercle bacilli in a diabetic patient, the valuable research work of veternarians and their optimistic trend in assuaging the scourge of humanity, mass surveys and the prompt detection of early tuberculosis are some of the stepping stones to our future success.

The surgical aspect of tuberculosis comprises the following :

1. Treatment by mechanical therapy.

2. Treatment by cavernostomy.

3. Treatment by extrapleural thoracoplasty.

4. Treatment by resection.

I will give a bird's eye view of the above mentioned surgical procedures.

1. Treatment by mechanical therapy:—

Artificial pneumothorax : Since the introduction of the 'collapse' therapy by Forlanini this has been considered to be the simplest and more generally applicable form of collapse therapy available, of course depending upon the judgement of the physician and his selection of cases for such therapy.

The main indications are :

1. A progressive tuberculosis not amenable to sanatorium treatment.

2. Presence of cavitation. (This is an immediate necessity.)

3. Cases which fail to regress or in which positive sputum persists under sanatorium management.

4. Haemoptysis (ordinarily an obligatory indication).

5. Tuberculous pleurisy with effusion.

Contra indications :

With an accurate knowledge of the bronchopulmonary pathology we contra indicate artificial pneumothorax in the following conditions.

1. Draining bronchus with associated stenosis.

2. Bronchiectasis and tuberculosis of the trachea (which do not respond to collapse therapy).

3. Atelectasis and empyema.

4. Tuberculous pneumonia (an absolute contra indication).

5. Extra pulmonary tuberculosis including laryngeal and intestinal tuberculosis.

6. Silicosis.

7. Controllable non tuberculous complications.

The ideal one is to spot the site of lesion and give a selective collapse and thereby provide adequate relaxation to that part while uninvolved portion of the lung is maintained in a relatively uncollapsed and functional state. Satisfactory management depends upon the administration of small amounts of air (500 cc.) at frequent intervals maintaining the intrapleural manometric record negative. The complications are : spontaneous pneumothorax empyema with or without bronchopleural fistula.

Phrenic nerve interruption : *Per se* rarely provides adequate relaxation to control active parenchymal disease. Paralysis of hemi-diaphragm is a usual adjunct to A.P. To obliterate the pleural cavity, to promote reabsorption of fluid in cases of effusion and to control the underlying pulmonary pathology, it is advisable to interrupt the phrenic nerve.

2. *Cavernostomy* :—Tension cavities, as we have already seen are cavities associated with a partial bronchial obstruction which permit inlet but not free exit of air and excretions. The indications for cavernostomy are the following :—

1. Tension cavities unclosed by thoraco plasty.

2. Huge tension cavities pressing on the lung parenchyma.

3. Basal cavities with or without surrounding pulmonary infiltration.

4. Uncontrollable cavities.

5. As a palliative measure in hopeless patients with distressing expectoration.

Under local aneasthesia a vertical incision is made over the presumed site of the cavity. Subcutaneous and muscle layers are divided and the bleeding points ligated. The previously injected dye is identified and the intercostal muscles and the periosteal beds are then freed from the parietal pleura. The entire wound is dusted with sulphonamide and packed with dry gauze.

After the formation of the granulation tissue a circular area of parietal pleura is then excised, cavity located, and its depth ascertained with an aspirating needle. Management of the sinus subsequent to drainage and closure of the cavernostomy are done in due coarse.

3. *Extra pleural thoraco plasty* :—A reshaping of the thoracic wall accomplished by the resection of the ribs for the purpose either of collapsing the lung as in pulmonary tuberculosis of obliterating a pleural space as in chronic empyema—The technique and management cannot be put

in a few lines and hence I will give only the main indications.

1. Large apical cavities.

2. Bronchial tuberculosis which is not amenable to antituberculous drugs.

3. Cavities in the base of the lung.

The operation is done in three stages depending upon the progress in each stage.

5. *Resection* :—The usual operations of resection are lobectomy and pneumenectomy. Lobectomy accomplishes removal of the gross tuberculous lesions and it does not deform the thoracic cavity like thoracoplasty. But it has got its own hazards like bronchial ftstula and empyema but the advantages in such resections are that they can be resorted to in cases of tucerculoma, progressive unilobar tuberculosis in the teen age group, extensive basal tuberculosis with bronchiectasis etc.

With my apologies to my readers since I could not elaborate it further lest it eats up more space, I conclude it saying that despite the advances made in fields, medical and surgical, we are yet unable to completely eradicate this evil. In that endless battle between the oragnism and the human being, we the stronger are not prepared to lose the battle, but we will fight to the finish, till we succeed.

Excerpts from third years' answer papers

(Certified genuine)

Louis Pasteur : After many years of investigation Pasteur discovered small-pox vaccine and saved so many lacs of lives and at last Pasteur died of the same d isease.

Louis Pasteur was romantic in his personal life. He loved the Dean's daughter. After a course of several letters he married her ; but for these romances he was an eminent bacteriologist.

Coagulase test : Test done in sepalococcus infection of the testis.

Autoclave : Some bacilli are multiplied by transverse fission, some multiply without reproduction. This is by cleavage—this is called Autoclave.

Treatment of Advanced Cancer

BY

Dr. S. SUNDARARAMAN, M.S.,
Hony. Assistant Surgeon,
Govt. Stanley Hospital, Madras.

Majority of the cancer cases are 'advanced' when first seen, either from the nature of the neoplastic process such as acute leukaemia or from delay in seeking advice or delay in diagnosis. Advanced cancers also include the post operative recurrences, post radiation activity, dissemination by blood borne or lymphatic metastasis. The management of these cases of advanced cancer is a major problem in most hospitals, even though the treatment is of palliative value only. Most of these procedures vary with the site of the cancer, its, extent, the mechanical disabilities caused by it, the degree of pain and the general state of the patient. Palliative minor operative procedures like tracheotomy, gastrotomy, short circuiting operations for the relief of jaundice or obstruction, colostomy and nervectomy have been tried for many years. The value and limitations of these procedures are well known. Operations purely for relief of pain like lateral tractotomy and prefrontal leucotomy have been tried in painful states of advanced cancer.

With the general advance in all fields in science there is a great advance in the treatment of advanced cancer. Even in advanced cancer, control for many years can be achieved chiefly by these methods: 1. Surgical. 2. Hormonal. 3. Radiotherapeutic.

1. SURGERY,

Excisional Surgery for advanced cancer is limited to lesions which, although extensive and involving regional lymph nodes, have not yet disseminated by blood stream and formed detectable visceral metastasis. Such cases fall anatomically into three main groups.

(*a*) Intra abdominal cancer.

(*b*) Cancer of mouth, pharynx and larynx.

(*c*) Cancer of the limbs.

(*a*) *Intra abdominal Cancer* :—This can be divided into lesions involving the stomach, pancreas and liver by direct extension as one group, lower abdominal cancer originating in one of the pelvic viscera and involving neighbouring organs by direct extension and cancer of the right or left colon involving the abdominal wall, spleen or kidney. The most heroic attempts of the removal of stomach, pancreas or part of liver have so far proved disappointing and there are hardly any cases on record where worthwhile survival in time or in comfort has been achieved. Right or left hemicolectomy or subtotal colectomy with removal of the spleen or the kidney directly involved by growth have yielded more satisfactory results and cases are recorded where such wide resections have survived for five

years or longer. The greatest advance has been in the development of total or partial pelvic viscerectomy for cancer originating in any one of the pelvic organs: uterus vagina, rectum or bladder. The operability range has extended from the set procedure such as exicision of rectum, hysterectomy, or cystectomy, when only one viscus is involved, to the complete emptying of the pelvis or removal of two adjoining viscera. Complete exicision of the tumour has been achieved by pelvic viscerectomy in patients who are technically inoperable if lesser proceedures only are carried out.

(b) *Cancer of the mouth, Pharynx and Larynx* :—Although radiotherapy has played an increasingly important part in the treatment of cancer in the upper food and air passages, there is a definite place for surgery in certain selected cases in the advanced stages of the disease. These are usually post-radiation recurrences, primary radiation failures, and lesions involving the upper or lower jaw or ethmoids. Only in advanced cases are these operations indicated and their justification is the possibility of arresting the disease if wide enough excision permits the clearance of it. In cases of ethmoidal cancers and of the maxillary antrum the usual operation of excision of the maxilla has been replaced by the 'fenestration' of the palate by the intra oral approach. This operation leaves no external deformity and the gap in the palate can be closed by a prosthesis.

In carcinoma involving the mandible and floor of the mouth hemimandibulectomy and excision of the floor of the mouth, continued with clearance of the cervical lymph nodes enbloc have proved of value provided the cervical lymph nodes are strictly operable (not merely removable) and that the lesion has not spread to the posterior wall of the oropharynx. Following such operation there is some deformity and temporary functional disability. Grafting of a new mandible should be postponed for a year.

Extensive operations on the pharynx and hypopharynx can be done when the disease is strictly operable and in patients in good general state of health and for post radiation recurrecnces, provided the regional lymph nodes are operable and the distal end of the lesion can be removed with an adequate margin of at least 1 inch. Incomplete or local excision leads to rapid local recurrence and great suffering. The larynx must of necessity be sacrificed and the main problem in such patients submitted to laryngo-pharyngectomy is the reconstruction of the pharynx and restoration of normal swallowing. The one stage operation with immediate reconstruction is the ideal aimed at. Attempts to achieve this by the use of Thiersch's grafts wrapped around plastic tubes have been successful but often require repeated dilatation for stenosis of the thin walled new pharynx. Multi stage operations necessitating the formation of tubed pedicles and skin flaps and their use for the formation of the new pharynx are tedious and require many weeks at the hospital. Many patients have survived in comfort for periods upto twenty five years following laryngopharyngectomy by one or the other method, and these operations have a definite place in the treatment of advanced cancer.

Cancer of the Limbs :—Primary malignant tumours of the limbs arise either from the bones or the soft tissues. There is a marked difference in the progress of these two groups of cancers. The primary melignant tumoursof bone almost always metastatize to the lungs within the first year and ablation of limbs as the sole metod of treatment leaves only a very small proportion of five year survivals. Primary soft tissue sarcomata of the fascia, muscles, synovial tissue or tendons are often amenable to wide local excisions including a group of muscles with preservation of useful function. The histological type of the tumours, the age of the patient and the actual site of the lesion will determine the suitability for amputation and its level.

The major amputations, the so called fore-or hind-quarter amputations are indicated only in a very small group of cases, Such tumours are situated at or near the

shoulder or hip joints or are as a rule bulky, painful and often extend to scapula clavicle or innominate bone. The mortality is negligible but the physical deformity is great. It should be reserved for primary neoplasms of low grade malignancy in the absence of metastasis.

The hind quarter amputation is a formidable procedure and applicable only to a limited number of patients. Selection of cases require considerable experience of the nature of the tumours, its extent and spread and the correct assessment of the operation involved. Shock and blood loss can be minimised in this formidable procedure by early ligation of the common iliac vessels. Suitable artificial limbs enable the patient to walk.

HORMONES—

Cancer only in two anatomical sites, the breast and the prostate, can be controlled by hormones. Both the administration and the withdrawal of the sex steroids can affect the neoplasm and result in regression or temporary disappearance of the tumours. Removal of the ovaries for advanced breast cancer has been practised for the past sixty years. It is now acknowledged that surgical castration is more effective than radiological castration. In 1951 Charles Huggins observed that following castration and after menopause there is still a considerable production of oestrogens and that these steroids disappeared completely after adrenelectomy, Huggins noted that some cancers of breast are dependant on harmones for their development and maintenance. In these cases of breast cancers which are harmonally dependent, bilateral adrenelectomy gives rise to marked relief of pain, regression of primary and of secondaries in skin lymph nodes, lung and liver and there is recalcification of osteolytic lesions. After a bilateral adrenelectomy patients must be maintained on cortisone.

As an alternative to bilateral adrenelectomy removal of the pituitary has been tried in cases of advanced cancer breast with indifferent results. One danger in this is bilateral optic atrophy due to irradiation.

RADIOTHERAPY—

Radio therapy is mainly a palliative measure in advanced cancer. Radiotherapy has a wider field of usefulness than surgery which is limited by anatomical considerations. Radiotherapy though only palliative prolongs life and increases comfort.

The treatment of advanced cancer by radiotherapy aims at achieving regression of tumours with the least possible damage to skin, lung and bone marrow. The so called deep-x-rays at 250 KV leads to severe skin reaction and constitutional disturbances. The use of mega volt therapy employing X-ray machines such as a million electron volt generator, the betatron or the large cobalt units which contain the equivalent of 1000 grams of radium in modern days diminishes the incidence of radiation sickness as the penetrating power of these energies are high. They lead to less haemopoietic changes and less injury to skin. A further advance is the technique of 'iotation' therapy where the tumour is exposed to a moving beam thus diminishing the skin dose further compared to tumour dose.

CONCLUSION—

Surgery, haromones and radiotherapy can to some extent control the progress of advanced cancer. These modern developements result in prolongation of life, relief of pain and to regression of tumours and render near—normal life possible. The advent and use of chemotherapeutic drugs like nitrogen mustard, urethene, T.E.M., Myeleran and others to control certain types of Malignant disease indicate to some measure the biological control of cancer. Herein may lie one of the fundamental secrets of the nature of cancer. The surgeon's knife and radiotherapy have not cured the advanced cancer. The future may possibly reveal the control of cancer by drugs and hormones than by surgery and radiotherapy.

Reference :

Sir Stanford Cade—Treatment of advanced cancer.—Medical annual.

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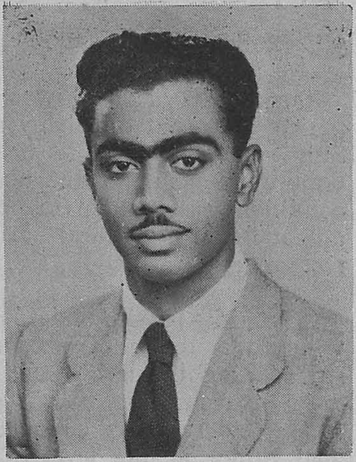
MADRAS 5

A CASE OF PROLAPSE OF THE RECTUM TREATED BY THIERSCH'S WIRING

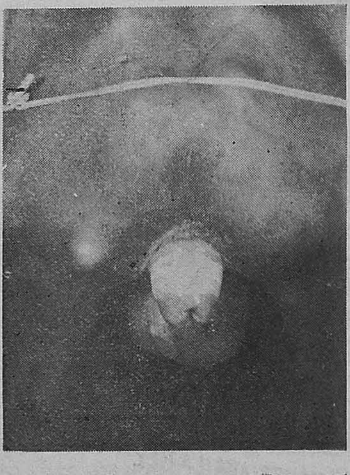


BY

R. BALASUBRAMANIAN,
3rd Year.

Gangadaran aged 30 was admitted in Bryson ward on 17—9—'57 with a complaint of a mass coming down per rectum for the past 25 days.

Patient gave a history of diarrhoea for 10 days following which he felt a mass coming down per rectum. There was no



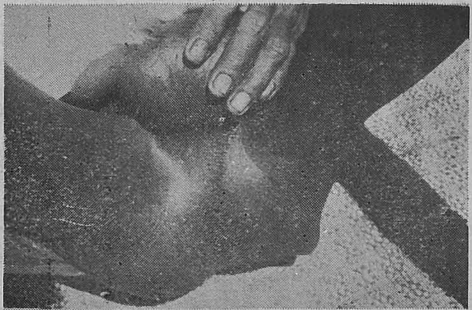
Prolapse Rectum :
Before operation

history of bleeding per rectum or difficulty in micturition or defecation.

The onset of the present complaint was sudden and the mass had gradually increased in size.

On examination, the patient was markedly emaciated and anemic. There was a complete prolapse of the rectum, the prolapse measuring more than three inches in length and with voluminous circular folds of mucosa on its outer aspect and a rounded opening at the summit. The tone of the sphincter was present but reduced.

All other systems were normal : Investigations : Urine—No albumin, sugar or acetone.



Prolapse Rectum :
After operation

Motions—No amoebae. no ova, no cysts.

Serum Proteins : Total 7-09G % Globulin 2-98G %.

Blood Urea : 32 mg. %.

Weight : 60 lbs.

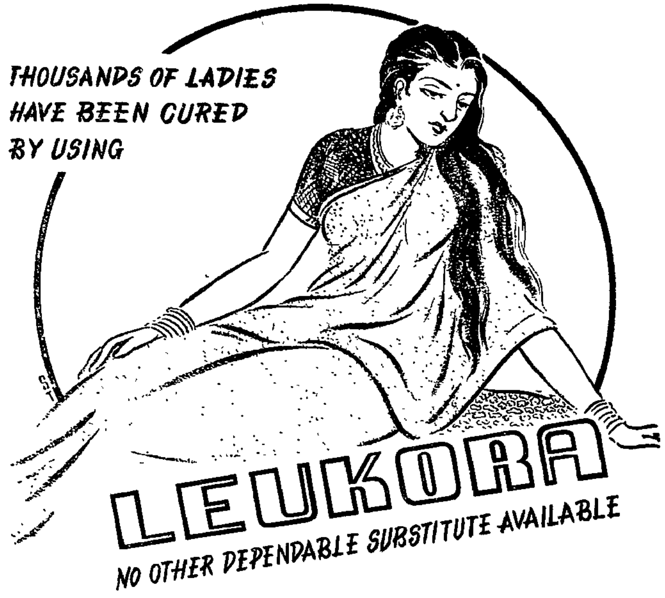
Blood Group : ' A '.

Two bottles of blood were given and the patient was put on highly nutritious diet. Still on 13—10—'57 he had put on only 6 more pounds in weight and the general condition was thought to be too poor for an abdomino—perineal exicision of the rectum.

So on 25—10—'57 under local anesthesia, wiring was done. Three radial incisions surrounding the anus were put at equal distances from each other and a stainless steel wire was passed completely round the anal orifice at the level of the external sphincter by introducing the ends through one incision and bringing it through the next and repeating this through all the three. The two ends of the wire were twisted till the anus could just admit an index finger and the twisted ends buried subcutaneously. The incisions were not sutured.

On 4—11—'57, when the patient was discharged he had put on ten more pounds of weight, passed motions normally and was quite contended. The anus looked normal. The photographs taken before and after the operation are reproduced herewith.

This case is a good example of the value of Thiersch's wiring, a very simple procedure suitable for cases which will not stand more major operation. The results of this operation in these cases are excellent.



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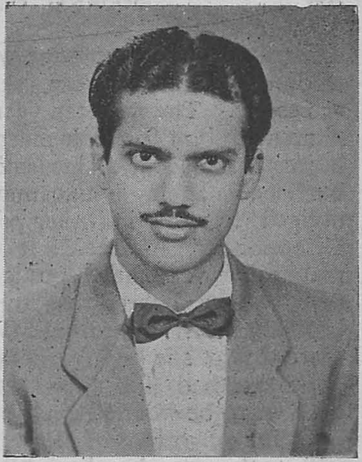
MADAME CURIE— A Biographical Sketch



BY

JOSEPH STANLEY CHANDRAN,
3rd Year.

Of Madame Curie, Einstein said : 'She, is, of all celebrated beings, the only one whom fame has not corrupted. " Here are a few glimpses into the life of Curie, who "gave her all and took nothing,.........the exceptional purity of whose soul neither fame nor adversity could corrupt, " mostly in the words of her beloved daughter, Eve Curie, taken from her biography of her mother.

Marie was born on November 7th, 1867. She was the youngest of Sklodovski children and the best loved in the house. She was affectionately called Manyusya, comically nicknamed Anciupecio and Manya was her diminutive ! She had no greater happiness than to crouch nearby as close as possible to the pensive and charming figure of her mamma, and be bathed in immense tenderness—a word, a smile, an affectionate look. There was never a hard word at home. She grew a stranger to stupidity, pettiness or vulgarity....

Little Anciupecio was impatient one day to see her sister Bronya faltering out a simple lesson to her parents. Manya took the book and read aloud from it. But a look at the stupefied faces of her parents and the sulky stare of Bronya was enough to make her stammer and the infant prodigy became a baby of four crying and afraid that she would never be forgiven ! ...

When eight, her eldest sister succumbed to typhus. And in 1878 her mother breathed her last. Manya learned that life was cruel, cruel for the race (the poles were ruled by the aggressors, the Austrians, Russions and the Germans), cruel for the individual. But she never complained....

Manya was healthy, and honest, sensitive and gay. She had a loving heart. Her teachers knew her to be remarkably gifted. She was a brilliant student.

Manya took the third gold medal in the family home when she finished her secondary studies. Bronya and her brother Joseph had won the others. She then worked as a governess. But her love for learning never left her and instead of teaching the children she wished to be a student herself in Paris...

Her family was in straitened financial circumstances. But generous and considerate as she was, she helped Bronya pursue a course in Medicine in Paris, telling her that her turn will come when she graduated. "My plans for the future," she wrote to a friend, "are so commonplace and simple that they are not worth talking about." She meant to go through life as well as she could and when she could do no more, would say farewell to this base world. The loss would be small and regret for her, short.

The eldest son of her employers fell in love with this graceful girl, mysteriously

different from others—one who was pretty, who could dance, row, skate, make up verses etc. The nineteen year old girl made plans with him for their marriage. But the boy's parents raised insurmountable social barriers. Their son cannot marry one obliged to work in other people's houses. Disappointed in her intellectual dream, materially very hard put and unhappy in love, Manya offered her support for her brother and sisters to have full lives. The more regret she had for herself, the more hope she had for them ! " Life did not deserve to be worried over "...

But though she disposed of her talents, God proposed an outlet for them ! The medical student had graduated and settled with her husband. Manya was on her way to Paris from Warsaw. She felt gay and her grey eyes sparkled before the departure. But at the thought of leaving her home, her country and most of all her papa, tormented by scruples, she kissed her father and overwhelmed him with her tender, timid words.

The courses began at the Sorbone on November 3rd, 1891. To her class-mates she was a foreigner with an impossible name (Sklodovski)! She was always in the first row in the physics class. She was fascinated by certain grave gentlemen named " Professors of superior instruction "! Since she could not concentrate on her studies living in her sisters's house, she went to live in quarters near the university, the laboratories and the libraries. She virtually lived on 3 francs a day paying for her rooms, meals and books. She ate little but worked hard at her studies. The cold, her hunger, her ill health were all forgotten in her love for books...She passed first in the Masters Examination in Physics in 1883 and in the next year she passed second in the Master Examination in Mathematics ! ...

It was as such a good student that she met Pierre Curie. He was a Frenchman, a scientist of genius and was thirty five. He got his Bachelor's degree in science when he was sixteen and got his masters degree two years later. A dear friend since childhood whom he had intended to marry, had died and Pierre remained a batchelor. He followed an anti natural path, his thoughts given to science which estranged him from the humanity nearest him.

For Marie, Curie looked young, appeared slightly careless in his lofty stature and simple. His smile was graceful and young, inspiring confidence. They discussed scientific matters together. Pierre grew fond of her and he longed for her company which she willingly offered. Pierre soon found himself inseparably attached to her.

Marie made no hasty decision.She made Pierre wait for months. After careful consideration, she finally gave her assent to marriage and on July 26th, 1895, Marie Curie became Madame Pierre, after a simple " ceremony ". For her wedding dress, Marie had one " practical and dark that could be put on to go to the laboratory!"

This exceptional pair loved each other tenderly. Pierre tried to learn Polish and Marie learned to cook and she found cooking " as mysterious as chemistry !" Marie became a mother on September 12th, 1897—mother of Irene, a future Nobel Prize winner. The idea of choosing between family life and her scientific career did not even cross Marie's mind. She was resolved to face love, maternity and science, all the three and to cheat none of them. By passion and will she was to succeed....

Amidst the duties of a housewife, she was working upon the most important discovery of modern science. The french scientist Henry Becquerrel had published his discovery of the spontaneous emanation from Uranium. Marie was fascinated by this ' Radiation '. The subject was a virgin field. Courageous and daring as she was, she plunged herself into an unknown realm. It is hard to exagerrate the trying circumstances under which she worked. Marie took revenge by noting the temperature of the little shed, her laboratory, in her note book. Among formulae and figures she wrote, "Temperature 6.25° ! ! ! ! ! ! ! ! ! ! !."

Marie suspected the presence of a new element hitherto unknown and unsuspected as the cause of " Radiation ". In 1902 Marie succeeded in preparing a decigramme of pure radium, the new element. It was 9 o'clock at night. Only at seven they had left the shed, the laboratory. " Suppose we go down there for a moment " said Marie. The Curies stood at the door of the shed and Pierre turned the key in the lock. " Don't light the lamp !", Marie said in darkness, " do you remember the day when you said to me, 'I should like radium to have a beautiful colour ' ! " " Look...... Look ", she murmered and pointed towards the phosphorescent bluish sources of ' radiation ', the Radium. Radium was born, but with great merit and even greater modesty, the Curies remained unknown for a long time. They continued to live an hard life, ' A pretty hard life we have chosen ' said Pierre once, but only once to Marie......

Radium was used effectively in the treatment of certain malignant tumours and the manufacture of Radium was contemplated. But the Curies sought no patient for it. " It would be contrary to the scientific spirit ! " said Curie, and Pierre repeated it like an echo.

On December 10, 1903, the Nobel prize in physics for the year was divided between the Curies and Becquerrel. Over worked and unwell the Curies did not make the long journey to receive the diploma and medals. The award brought the couple into the limelight.

Fame opened her arms to them. The commotion caused the Curies all but pleasure. They did not know how to be famous. Their quiet, peaceful existence was disturbed. They lost their peace .....

It was April 19, 1906. Pierre was walking along a road, lost in his thoughts, behind a slowly moving cab. He wanted to cross over to the other side and was surprised to find himself between the cab and a fast moving heavy wagon. He fell down when he tried to hug on to one of the horses. Pierre escaped the horses' hooves and the front wheels...But his head was crushed by the rear left wheel ....

Marie incapable of speaking of her woe before human beings was lost in silence, a desert which made her cry out with horror. She poured out her heart in sentences in her diary, in a trembling hand, in tear splotched pages ....

Marie was appointed as Professor in her husband's place- a unique occasion. She continued her research on Radium. The Nobel prize in chemistry for the year 1911 was to be awarded to her. She was busy in the laboratory without exposing her grief and sorrow to anybody and her physical depression worsened day by day. Her kidneys were affected and she had an operation in 1913.

Of course one would expect nothing more from the widow. But she was to become a soldier and radiologist yet. The Germans entered France in 1914. Marie closed her laboratory and became a nurse in a white veil. All the X-Ray materials were collected under her guidance and distributed to the hospitals around Paris. She created the first Radiological car—an ordinary motor car with a Roentogen Apparatus and dynamo. She equipped other cars likewise, which were nicknamed, " Little Curies ", and many radiological stations. She equipped 20 ' Curies ' and installed 200 radiological rooms at various places.

Marie, often cold and distant to many, was charming to the wounded and had a pleasing tone, light hands and a great deal of immense religious respect for human life. She was ready to exhaust herself to save a man's life or to spare him from suffering. In all her work Marie remained in the shadows. The " I " was not just detestable to Marie ; it did not exist !

The world found itself calm again. Marie sought remedies for the barbarity of the peoples which would eradicate rancour and hatred. The idealist was attracted by the Wilsonian doctrine and had faith in the League of Nations. . . . .

Poland became free again, and Marie was haunted by a great project : a radium institute at Warsaw, her mother land. Her stubbornness along with 'bricks for the Marie Sklodovoka Curie institute' donated by her country helped her realise her dreams. America donated its second gramme of radium to Marie, now for the laboratory at Warsaw.......

One day she murmured to her collaborators, " I have a fever " and left her laboratory for home. In the garden a rose looked sick and she called to the mechanic and said, " George, you must see to it right away ! " She got into her car and turned back again, " Don't forget George, the rose vine. . . ." That was her last farewell to her laboratory.

At home she was not to leave her bed again. She had a hope on purer air and also the doctor thought that a visit to the mountain will do her good. On July 3rd she held a shaking thermometer in her hand and noted a fall in her temperature. She smiled with joy, " It was not the medicine that made me better. It was the pure air, the altitude . . . ." She died on July 4th 1934. Science still had to pronounce its verdict over her body. The abnormal symptoms and the blood tests, differing from those in any known case of pernicious anaemia, accused the true criminal— RADIUM.

Appellation and Interpretation.

Advisory Committee : A set of people who can individually do nothing and collectively decide that nothing could be done.

Birth Right : Our unchallengeable right to produce innumerable children.

Look here, N. C. C. Guys :

Officer : " You brought me the wrong boots, you idiot, Can't you see that one of them is black and the other one is brown ?"

Orderly : " Yes Sir, but your other pair is just the same. "

AT roll call in a regiment it is reported that an officer sneezed and four soldiers prompthy answered, " Here. "

In Memoriam

MISS HEMALATHA RAO

Miss Hemalatha Rao, daughter of Mrs. and Mr. Bhavani Rao, was born on 28—12—'39, in Mangalore.

Shrewd and sprightly, she had a bright career at the Government Training High School and St. Agnes College, Mangalore, where she executed her preliminary and higher studies.

She joined the Stanley Medical College in August '57, and in her very short stay here and the world at large she won the esteem of many, and also held office as the Pre-clinical representative for women at the College Association. Agile and Active, she had grace in her gait, charm in looks and clarity in talk. She was prompt and brilliant at her studies and had talents for sports.

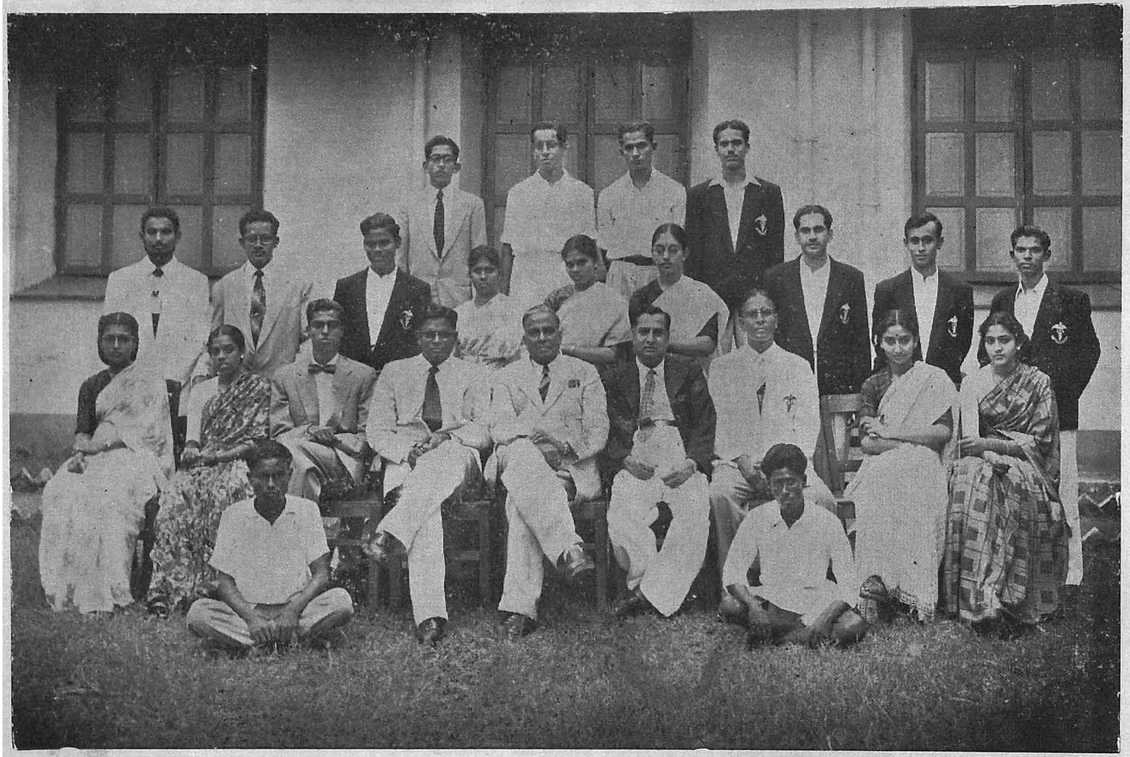
She went home for her Michaelmas holidays, and the tragic end of her life, full of promise, came as a shock to her family, friends and relatives, on the 13th of October, 1957.

The loss is heavy, unexpected and sudden.

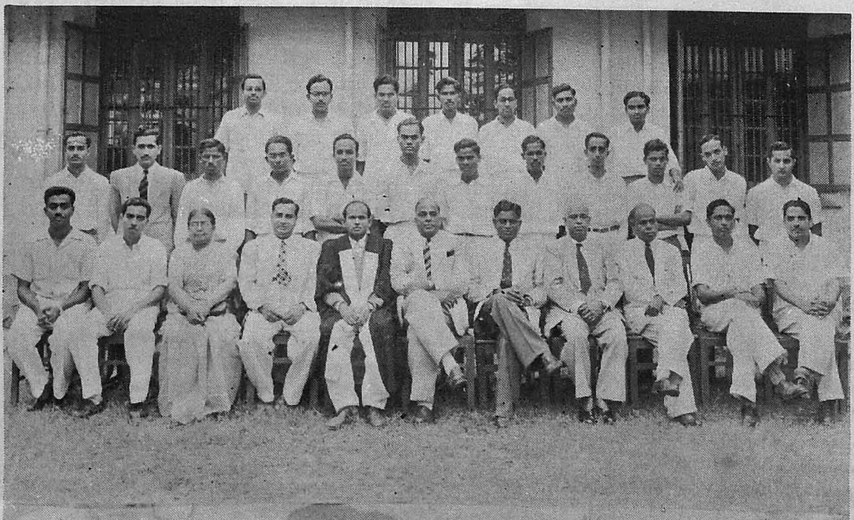
She lives in the fond memory of her dear friends.

May Her Soul Rest in Peace.

THE ATHLETIC ASSOCIATION



RURAL MEDICAL AND SOCIAL SERVICE LEAGUE - 1957-58



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2nd Row—Dasarathan, Dr. Venkatachalam (*Adviser*), Somasundaram, Dr. Kalyanaraman (*Jt. Treasurer*), Chowdappa, Sundaram, Sivarajan, Swaminathan, Balasubramanian, Palanivelu, Dr. Krishnagopalan (*Adviser*), Dr. Kasturi Sarma (*Adviser*),

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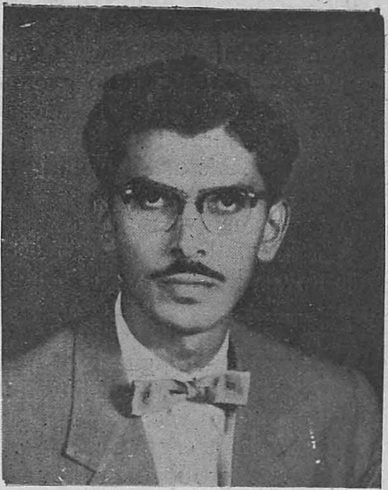
2nd Row—Ahmed Khan (*Foot Ball*), Duraisamy (*Gymnasium*), Sivarajan (*Tennikoit*), Merina Rodrigo (*Net Ball*), Padmavathy (*Throw Ball*), Radha (*Tenni Koit*), Hasan Aly Khan (*Hockey*), Abdul Jabbar (*Volley Ball*), Sivaprakasam (*Tennis*)

Sitting—Premkumari (*Badminton*), Sakunthala (*Associate Secretary*, Durairaj (*Secretary*), Dr. M. Natarajan (*Ex-officio Vice President*), Dr. C. Ragavachari (*Ex-officio President*), Dr. A. R. Govinda Rao (*Treasurer*), Mr. K. Srinivasa Madhavan (*P.D.*), G. Nalini (*Tennis*), Vimla David (*Volley Ball*), Pancha & Kannan (*Markers*).

A Case of Volvulus of the small Intestine with Jejunal Diverticula

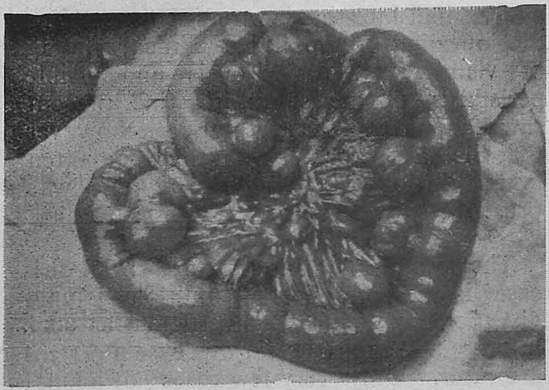
By

K. K. RAMALINGAM,
3rd Year.



Bojji Khan, aged 40, was admitted in Bryson Ward at 11-50 a.m. on 24—9—1957 for colicky pain in the epigastrium since 4 a.m. that morning.

Patient's history was that he had a sudden onset of severe colicky pain in the epigastrium at 4 a.m. He has been having intermittent attacks of colicky pain at the same site for the next eight hours. Pain was not radiating to any other side.



JEJUNAL DIVERTICULA

Immediately after the onset of pain he had severe nausea and tried to induce vomiting unsuccessfully.

He passes normal-looking motions once soon after onset of pain but passes neither motion nor gas after that.

He gave a history of occassional dyspepsia with vague epigastric pain. This pain was not related to food. There was no past history of similar attacks of colicky pain. There was no history suggestive of amoebic or roundworm infestation in the past.

On examination, the abdominal wall was normal. The epigastrium was distended, with visible peristalsis from left to right. The umbilical region showed three oblique distented loops of intestine with visible peristalsis. There was no general distension of the abdomen which was moving freely with respiration.

Palpation revealed nothing abnormal except the distended loops which were visible. There was no rigidity, no muscle guard, no free fluid, no hyperesthesia, no tenderness, no lump and no tenderness in the renal angle. Liver and Spleen were not palpable.

There was a uniform hyper-resonant note on percussion. There was no shifting dullness and liver dullness was not obliterated.

Auscultation revealed hyperperistalsis in all quadrants of the abdomen.

The hernial sites were normal. Rectal examination added no significant finding.

The respiratory, cardiovascular and nervous systems were normal.

The general condition of the patient was quite good. Pulse 84 per minute. Respiration 24 per miuute. Temperature 98-4 F. Blood Pressure 150-90. There was no sugar, R.B.C.'s or albumin in the urine.

An enema was given and the patient passed a small quantity of faeces. A second enema was returned without faeces flatus or force.

A provisional diagnosis of Acute Obstruction of the upper small intestine was made and the patient was prepared for an Emergency Exploratory Laparatomy. A blood sample was grouped and found to be 'O'.

With a premedication of one amp. of Papaverine with one amp. of Atropine, general anesthesia was induced by intravenous Pentothal and maintained by endotracheal nitrous oxide and oxygen., and the abdomen was opened at 2-30 p.m. by a mid-paramedian incision. Distended coils of small intestine presented in the wound. The cecum was missing in the right iliac fossa. The distended loops were traced up proximally to the jejunum which was near the right iliac fossa. Distal tracing of the small intestine led to the cecum which was found collapsed close to the midline on the posterior abdominal wall drawn upwards and to the left from its normal position. The summit of the small intestine was distended, congested and dark purple in color. The whole of the mesentery was edematous congested and showed petechial hemorrhages.

Volvulus of the entire small intestine (180° anticlockwise) was therefore diagnosed. The whole of the twisted small gut was brought out into the wound and replaced again inside the abdomen, undoing the twist. As this was done, the jejunum was found to contain about a dozen diverticula near the mesenteric border on either side. They were globular varying in diameter from 1 to 5 c.m. with their lumina freely communicating with the gut. Their walls were perfectly healthy on naked-eye examination. A photograph of the diverticula taken on the operation table is reproduced herewith.

On reduction of the volvulus, the distension of the small intestine subsided immediately. The cecum and ascending colon which were collapsed regained normal diameter. A few ounces of bloodstained fluid was mopped out of the peritoneal cavity.

The viscera were again explored and were found normal except for a small tear in the mesentery which was repaired.

Under intravenous scoline the abdomen was closed in layers.

The patient had one bottle of 5% glucose saline and one bottle of 'O' group blood on the table.

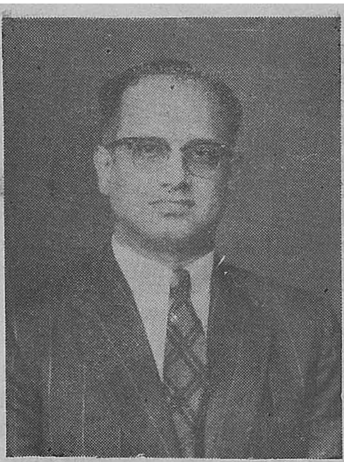
The post operative period was quite uneventful on the usual regime. The patient had Penicillin 5 lacs bd, Streptomycin 1G daily and Calcium Pantothenate one amp. 6th hourly for four days, after the operation.

This case is reported for two interesting clinical features. Firstly, volvulus of the entire small intestine is rare. This explains the puzzling pre-operative clinical finding of visible gastric peristalsis and visible peristalsis of the small intestine present simultaneously. It is remarkable however that the patient had no vomiting for the ten hours during which the volvulus was present.

The second interesting feature about this case is the presence of multiple jejunal diverticula. Jejunal diverticula as such are rare and multiple (in this case a dozen) are rarer. Only very few cases of jejunal diverticula with volvulus of the entire small intestine have been reported.

I thank Dr. G. Atmarama Rao, M. S., Professor of Surgery, Stanley Medical College & Surgeon, Govt. Stanley Hospital, for permission to report this case from his unit.

NOR-ADRENALINE IN SHOCK



BY

Dr. K. S. SAMPATH, M.S.,

Hony. Asst. Surgeon, Govt. Stanley Hospital, Madras.

Enough has been written in literature about adrenaline which was regarded for long as the only specific hormone of the supra-renal medulla. Its association with nor-adrenaline has aroused considerable interest in the profession in recent years.

Though pharmacologically it is a fairly old drug, yet it is a newer introduction in the surgical field and it has helped considerably the management of peripheral vascular failure.

During the last two years, we have treated five cases of peripheral failure due to different causes (details given below) and of these we were able to save four patients.

List of Cases—

Gastro duodenal perforation	...	2
Ileal perforation (due to typhoid)	...	1
Post operative gastrojejunostomy	...	1
Strangulated umbilical hernia	...	1

Case Report—

A well built young man aged about 20 was admitted on 25—10—56, for pain in the abdomen; which was typical of chronic duodenal ulcer.

His B.P. was 120/86, Pulse rate 72/min and Hb 80%.

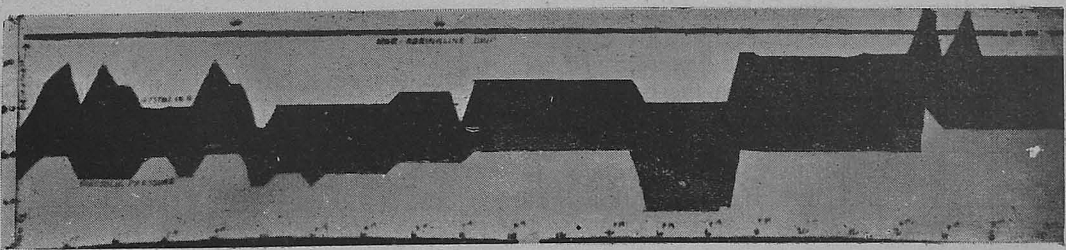
30—10—56:

He was operated under high spinal anaesthesia ; diagnosis was confirmed and a posterior retrocolic gastrojejunostomy was done. No complications were met with during the operation. But towards the night his general condition deteriorated with no apparent reason. Nine ounces of fluid were aspirated from the stomach. One bottle of glucose-saline and one bottle of blood (350cc) were given by intravenous drip.

31—10—56 :

7 a.m: pulse was rapid, B.P: 80/60.

Blood transfusion did not improve the condition. 10 a.m.: Nor-adrenaline drip was started (one ampoule of nor-adrenaline in one pint of 5% glucose-saline). At first drip rate was 20 drops/min and it was gradually increased, recording the blood pressure every ten minutes. With 50 drops/min, the blood pressure rose up to

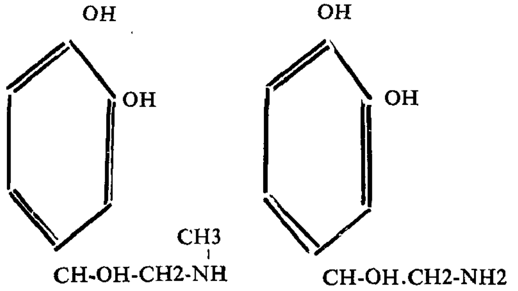


BLOOD PRESSURE CHART.

100/m of Hg. and this rate was maintained for about 46 hours after which reduction in the drip rate did not cause any fall in the blood pressure and hence the drip was discon tinued (technique of nor-adrenaline administration is described separately). Further recovery of the patient was uneventful.

Discussion—

Adrenaline is a secondary (catechol) amine, one atom of H ion in the group NH_2 being substituted by CH_3. In nor-adrenaline this CH_3 group is absent and it is therefore a primary amine.



ADRENALINE NOR ADRENALINE

Both adrenaline and nor-adrenaline are oxidised in the presence of oxygen, in alkaline medium and if heavy metal ions are present. They are however stable. in weak acid solution, 5% dextrose solution and in distilled water.

Nor-adrenaline has been shown to be present in extracts of all tissues, (except placenta which is devoid of nerves). Probably the nerves in these organs are responsible for the nor-adrenaline and there seems to be a definite correlation between the nor-adrenaline content and the number of adrenergic fibres. In addition to the nor-adrenaline a small amount of adrenaline also occurs in the adrenergic fibres and this is probably due to the presence of chromaffin tissues in the vicinity of these nerves, because after sympathetic denervation of these tissues, nor-adrenaline is diminished but not the formation of adrenaline.

The presence of nor-adrenaline in the supra renals was first discovered by Holtz in 1947, and later, James showed that nor-adrenaline and adrenaline are the only catechol amines found in normal supra-renal extracts. The relative amounts of adrenaline and noradrenaline vary greatly in different animals, and in the same animal under different conditions. In man nor-adrenaline constitutes 20% of the total catechol amines whereas in whale it is 80% and in rabbit almost nil. These variations in the amount of adrenaline and nor-adrenaline under different conditions indicate that probably one is the precursor of another (nor-adrenaline is the precursor of adrenaline) each having its own function to perform in the body. (the mechanism of conversion of nor-adrenaline to adrenaline and metabolism of nor-adrenaline are not discussed here.)

Differences between adrenaline and nor-adrenaline.—

	Adrenaline	Nor-adrenaline
1. Blood Pressure Systolic Diastolic	 Raised Nil	 Raised higher Raised
2. Pulse rate	Raised	Lowered
3. Cardiac output	Raised	Lowered
4. Vessels of skin	Constricted	Constricted
5. Vessels of skeletal Muscles	Dilated	Constricted
6. Sum total effect of 4 & 5 i.e. peripheral resistence.	Diminished	Raised
7. Metabolic effects: Blood sugar Tissue Respiration	 Raised Raised	 Nil Nil

The surgeons' interest in nor-adrenaline is due to :—

(1) Its use in hypotensive anaesthesia

(2) Its presence in pheochromocytoma.

(3) Its use in the management of shock.

Of these, the last will be discussed here.

The aims of treatment of shock are, (1) to restore the B.P. to normal or near normal (i.e. at least 100 m.m. of Hg.) as quickly as possible before irreversible damage is done to the tissues and (2) to remove the cause.

A young healthy individual may be capable of withstanding anoxia of hypotension for a considerable time, but an elderly patient, half starved and undernourished, will not be able to stand the same for an equal period, without deleterious effect on his health. The damage done to tissues may be irrepairable. The period for which they will be able to withstand the hypotension is variable: hence every endeavour must be made to raise the B.P. to normal or at least 100m.m. of Hg. as quickly as possible and for this, we rely mainly on transfusion of blood and blood substitutes. Often we succeed, but there are a few patients in whom infusions fail to increase the B.P. within a reasonable period, and in these patients nor-adrenaline must be given a trial without much delay. Blood transfusion is still the sheet anchor in the treatment of shock: nor-adrenaline can only supplement and not supplant the traditional methods in the treatment of shock.

Technique of administration:

Nor adrenaline is given by Intravenous drip: 2 to 10 mgms in one pint of glucose saline. At first the rate must be very slow (about 20 drops per minute), blood pressure must be recorded every ten minutes and the rate of flow gradually increased till the B.P. is raised to 100m.m. of Hg. Blood pressure must be maintained at this level by adjusting the rate of infusion by trials. If there is no fall in B.P. by reducing the drip rate, nor adrenaline can gradually be reduced and discontinued.

Progressively increasing dosage of noradrenaline may be required in some patients. This may be due to (1) Progressive deterioration of the patient's condition and (2) development of tolerance which can be prevented with cortisone.

Advantages of Nor-adrenaline:

(1) Quick in action.

(2) No toxicity.

(3) Acts without overloading the blood vascular tree.

Dis-advantages:

Vaso contrictor effect is unselective and hence the blood flow through the vital organs may be reduced, but in successful cases the level of consciousness and the urinary output have been quite satisfactory, suggesting that the blood supply to the brain and kidneys were not jeoperdised.

Conclusion:

In cases of shock, the traditional methods of resuscitation must be tried first, and if these methods fail, within a reasonable period nor-adrenaline must be started without much delay. In shock due to intestinal perforation and other causes (which require surgical interference), noradrenaline helps to raise the blood pressure and make the patient fit for the surgical procedure.

I would like to express my thanks to Dr. K. C. Nambiar, F.R.C.S., Hony. Surgeon, Govt. Stanley Hospital, and the Dean, Government Stanley Hospital, for permitting me to publish this article.

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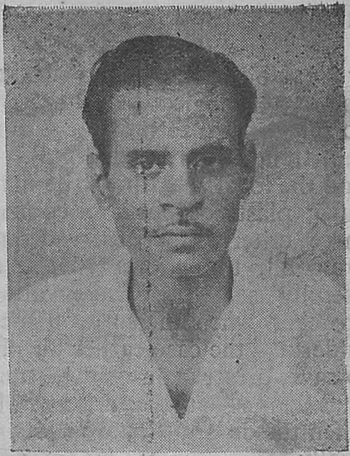
PLASTIC AND RECONSTRUCTIVE SURGERY IN LEPROSY



BY

Dr. J. D. KANAKARAJ, M.B.,B.S.,
Asst. Surgeon, Govt. Stanley Hospital, Madras.

With the advent of Sulphones and other chemotherapeutic agents the outlook in leprosy has changed. Among planners, administrators, sociologists and leprosy workers there is a greater emphasis in all aspects of the disease. It is realised that with these drugs we are now in a position to offer to the average patient a method of treatment by means of which his clinical lesions are made to regress, his becteriological index reduced to zero and the patient thus made non-infective.

In achieving this, however ,a situation which did not exist formerly has now been created. The question of rehabilitation of the leprosy patient is as serious as treating the disease or its control. What are we to do with a patient who has been made clean with the sulphones ? Under sulphones therapy the average period of treatment and isolation from contacts is from three to five years. It is now needless to remark that as a result of this the patient suffers a dislocation from his or her home, school or factory. After treatment is concluded the patient must find his or her way back to home, to work and to the position formerly occupied in society. It is with this process of recovery, physical, moral and economic, that rehabilitation plays an important part. Rehabilitation as a social science is a child of the twentieth century. Within the past twenty-five years we find rehabilitation applied to the victims of two great wars, and in our own country, of partition and its aftermath. It is therefore not surprising that in the rehabilitation of the leprosy patient surgery has been summoned to play its role. What then are the functions of the plastic and reconstructive surgeon in the programme of rehabilitation ? Before this question is answered another must be asked. What prevents the leprosy patient from returning to society ? There are many factors and one is public prejudice and the other is that he must be suitable for the same employment held before his disease, or if that is not possible some other form of occupation. If one studies the matter deeply one realises that the principal feature of public horror towards the leprosy patients appears to lie in its mutilation and deformities. It is then the duty of the plastic and reconstructive surgeon to correct his deformities and mutilations so as to render his re-entry into the society possible and having re-entered, to be useful to himself and as a bread-winner to his family. The plastic and reconstructive surgeon is however not a lone worker. It would be a mistake if this were so. He might perhaps proflt himself or the individual patient but he does not serve the community or the cause ? Therefore in any wide and comprehensive programme against leprosy the plastic and reconstructive surgeon has a definite role to play. He works in close liasion with the leprologist and the social worker. As in other branches of surgery his surgery has to be timed in order to achieve the best results or to confer the maximum benefits on the patient. Definite criteria have been laid down in the application of these procedures and these are: (1) the disease must be arrested by the sulphones or at least

well stabilised under such therapy. (2) the bacteriological index must be reduced to zero or near zero or there should a persistent trend towards zero. (3). The patient and the local area should be fit for the particular plastic procedure contemplated. If these criteria are observed and the results are good, the efforts of the surgeon are usefully served. There are exceptions however when the surgeon is compelled to undertake the case earlier but this is always to save, preserve or restore function. The situations when these arise will be explained when the deformities are dealt with individually.

The deformities and mutilations that result in leprosy are broadly of two groups :—

Group A: Those that interfere with appearance.

Group. B: Those that interfere with function.

Dealing with each group we find in Group A the following :—

Their respective management is also discussed.

GYNEACOMASTIA:—

This condition constitutes a deformity in the sense that the male chest is converted in appearance to that of a female torso thus endowing upon the patient a reproach of effeminacy. Surgical exicision of the glands has constituted the only method of treatment. In leprosy Gyneacomastia occurs in a percentege of cases of lepromatous leprosy. The sulphones do not cause a regression of this condition and this can be understood if it is realised that gyneacomastia in leprosy results only when the testes are involved by bacillary invasion and the resulting hypogonadism causes enlargement of the breasts. Surgical excision is the only method of treatment in leprosy. I have tried Webster's Operation (mastectomy through an Intra-areolar-incision) in these cases, and obtained excellent results. It is a cosmetic procedure which aims at removing the gland without leaving any evidence of either the deformity or the surgery and at once restores the natural male contour to the chest-a point of extreme gratification to the patient. I have also extended this operation to non-leprosy patients and in a total personal series of nearly fifty breasts excised by this method, I have obtained uniformly good results. This operation has since been adopted by other surgeons working in this field and the results in their hands have also been good and at least at Chinglepet and Vellore it has been adopted as a routine procedure.

HYPERTROPHIC NIPPLES:—

In the infiltrative type of leprosy the nipples become enlarged and knobby. It is curious that where gyneacomastia occurs the nipples are normal but where this does not occur and where there is diffuse infiltration the above changes take place in the nipples. At Chinglepet we have adopted a plastic procedure whereby we have attempted to reduce the size of the nipples and restore its shape and contour. We have tried it in a few cases and find the results good. We intend to give the procedure an extended detail and to report on the technique.

TOTAL OR PARTIAL LOSS OF EYEBROWS:—

Alopecia is a feature of the lepromatous leprosy. In the white races who are extremely susceptible to the disease. Alopecia in the severe types is total, including loss of both eyebrows. Among our patients the alopecia is not seen except in extreme and longstanding cases but loss of eyebrows is of common occurrence. Cochrane observed that in the Mongoloid races the loss of hair from scalp is never complete and a trail of hair persisted along the distribution of the superficial temporal and occipital arteries. This observation had no practical value till American surgeons working in Korea noting the same thing evolved a technique for restoring eyebrows to their soldiers who had lost their own as a result of war injuries. Concluding from the above observation that

the persistence of hair along the distribution of arteries of the scalp resulted from the sufficiency of blood supply to the hair follicles, they made a flap graft in which the superficial temporal artery is included. The graft was diverted through a sub-cutaneous tunnel on its bed. In this technique we have now an extremely satisfactory method of eyebrow grafting which has been for long a sore and vexed problem with plastic and reconstructive surgeons. In the older methods which utilised free grafts from the scalp or other hair-bearing areas, if taken too thin they perished or if taken too thick survived, but the result was ugly and unsightly. This latest technique overcomes these defects.

EARS...

In lepromatous leprosy the ear is thickened and enlarged and this may be due to diffuse infiltration or due to nodulation or super nodulation. The effect of this is to give a thick and coarse ear to the patient which is both ugly and unsightly. Under sulphone therapy the nodules regress and the infiltration clears up but the tissues become loose and pendulous, particularly the lobes. When the nodule ulcerates it leaves marginal defects but this outcome is at present happily prevented by sulphone therapy. To correct these ugly and unsightly ears we have developed a technique at Chingleput whereby the appearance of the ear is restored to normal with least evidence of surgery. The patients have been so satisfied with the result that we now do it for everyone of our patients prior to his discharge. This is the simplest for deformity and yields well to a simple technique. Other deformities are more complicated. When cartilage is lost it is possible to restore shape by replacing lost cartilage by an alkathene strip. When skin too is lost a very narrowed tubed pedicle from the neck is swung over to make up for the lost skin. Such procedures are delicate and call for all the skill and resources of the surgeon. If these procedures fail as they may well do there is still an alternative procedure and that is to fit an artificial ear to the patient made out of Vinyl Plastic.

NOSE...

In lepromatous leprosy the nose bears the brunt of the disease. In general the following basic types are recognised in the alterations of the nose depending upon the stage and degree of the disease in which it is arrested. . In type I there is a nodulation of the alae nasi which produces changes in the shape and size of the nostrils. In type II where depression of the nose is the characteristic feature the pathological changes have been more severe. This depression can be anatomically sub divided into (1) Superior, (2) intermediate, (3) and inferior subtypes. In the superior type of depression the bridge of the nose is irretrievably lost as intra nasal ulceration ultimately leads to erosion and destruction of the nasal bone. Fortunately this outcome is not seen nowadays under sulphone therapy. In the intermediate type the septum of the nose has been eroded as a result of ulceration and the nose sinks over the corresponding area. When this occurs in the middle, the sinking in the centre of the nose causes an approximation of the bridge and the tip of the nose which results in the tip being unduly tilted. In the inferior type of depression, the lower part of the septum becomes defective with the result that the tip collapses giving rise to a flat nose. Further the intrinsic cartilage of the alae nasi may become eroded and replaced by fibrous tissue which causes puckering and flattening of the nostrils. The surgical management of each of these types is as follows.

In type 1 it suffices to excise the nodules and pare down the tissues with due consideration for symmetry and contour of the nostrils. In the other types it becomes necessary to restore the shape of the nose by cartilage or bone grafting. In cartilage grafting the early results are good but the late results are unpredictable. For these

reasons it is better to rely on bone grafting where both early and late results are good. The graft is introduced through a small vertical incision just below the tip and a thin path which is tunnelled. A fine chisel is passed through the opening and the nasal bone roughened and the graft allowed contact with it.

When the tip has collapsed in addition, it becomes necessary to raise the columella by either a vertical strut of bone or by a soft tissue procedure. When the alae nasi are distorted and flattened their correction is an extremly difficult problem. When in addition skin is also replaced by fibrous tissue the question of a full blown rhino-plasly or the use of artificial prosthesis has to be considered. The nose in leprosy is sometimes a real challenge to the surgeon but all available resources must be explored as the result is so vital to the patient.

FACIAL DEFORMITIES...

There are two facial deformities which afflict the leprosy patient. One is a wrinkling which follows improvement in the infiltrative form of lepromatous form of leprosy after sulphone therapy. A face lifting operation or some other suitable manoeuvre is neeessary to remove this blemish. The other type of deformity follows paralysis of the facial nerve. This may occur insidiously or may manifest itself acutely as in the reactive phase of the tuberculoid or atypical lesions. In either case protection of the eye takes priority over correction of the deformity. The operation of choice for this is tarsoraphy and is performed as soon as it is noticed that the patient cannot close his eyes. The paralysed muscles are supported by orthopaedic strapping. In leprosy particularly when the condition manifests itself acutely recovery takes place to a remarkable degree. When the recovery does not take place after a reasonable time or as in the insidous form the question of a facial sling operation has to be considered to correct the deformity.

DEPIGMENTED PATCHES...

In an effort to abolish the depigmented patch, skin grafting is practised but whether the hue of the transplanted or transferred skin will remain normal or become hypopigmented is unpredictable.

GROUP B :

In this group lie the principal deformities that affect the hands and feet. In leprosy whatever the type neural involvement occurs sooner or later. Indeed Khanolkar by his recent brilliant work has shown that all leprosy is neural in inception. However there is a constancy in the pathological involvement. It is only the peripheral nerves that are involved and that too only those that are superficial. The site of involvement is also more or less constant. In order of frequency the ulnar nerve at the elbow, the median nerve at the wrist and the radial nerve in the arm in the upper extremity and in the lower extremity the lateral popliteal, at the level of the head of the fibula and the posterior lateral after it gives off its branches to the gastsocnemius, soleus and tibialis posterior. It is now easy to visualise the resultant deformities and the methods of reconstruction that are available.

HAND...

In the hand in leprosy all the principal nerves may be affected either singly or in combination. It is usual for only one or two nerves to be affected except in atypical forms where there is widespread neural involvement when all three nerves may be affected. The common types are a pure ulnar nerve palsy, a pure radial nerve palsy or a combined median—ulnar nerve palsy. The type of deformity that one gets in each particular type results from the loss of function that follows them. Thus,

(1) In radial nerve palsy you get a wrist drop with loss of extension of fingers and thumb. Fortunately radial nerve involvement in leprosy is unusual and when it occurs is seen only in the atypical forms

where it may present itself acutely during a reactive phase. Return of radial nerve function may be expected and should be anticipated. Therefore the initial attitude is one of conservatism ; however if return of function does not take place within a reasonable period of time reconstructive surgery may be considered. It becomes essential when one realises that the wrist is the keystone of the hand and the latter is useless unless the position of function is assumed which is entirely dependent on the integrity of the wrist and its action—Two procedures are available 1) Tendon transfer : Here the wrist flexors are transferred to the dorsal aspect when they will act as wrist extensors. This is a classical procedure but has its limitations in leprosy for the following reasons.

(1) The wrist flexors themselves may be paralysed due to ulnar and median nerve involvement although it is unusual for forearm muscles to be affected.

(2) The wrist flexors cannot be spared for purposes of restoring wrist extension as they are important muscles used in reconstructive pracedure of the thumb when it is paralysed as it commonly happens in leprosy.

For these reasons it is unwise to adopt a tendon transfer for wrist drop in leprosy. The alternative procedure of arthrodosis in the position of function is far more satisfactory and makes no call or demand on other tendons and muscles.

(2) Ulnar nerve paralysis: This is manifested by extension of the metacarpo phalangeal joints of the ring and little finger and flexion of their proximal and interphalangeal joints. The position adopted by these joints and constituting the characteristic deformity is entirily the result of loss of lumbrical action. It is important to ralisei this when one considers reconstructive surgery in correcting the deformity. If lumbrical action can be restored, the deformity corrects itself. Prior to this certain principles are to be observed. When one remembers that the fundamental action of a muscle is to approximate its point of origin and its point of insertion and in doing so it only serves to move a joint, the importance of physiotherapy becomes evident. A healthy muscle when it acts can only move a healthy joint i.e. a joint with its full range of mobility. A joint which is stiff cannot be moved by a muscle however healthy it may be, unless the joint be rendered mobile. When another muscle is utilised to move the same joint by tendon transfer or tendon transplantation it will not act upon it, should it be stiff and unless and until rendered mobile. To convert a stiff joint into a mobile joint certain procedures are available. These are 1) Physiotherapy 2) capsulotomy 3) arthroplasty. Physiotherapy alone can achieve much and has an established place in the reconstructive surgery of the hand in leprosy.

Assuming that the joints concerned are mobile in a pure ulnar palsy or if not, they have been rendered mobile by a course of physiotherapy the simplest operation available is also one introduced early in the reconstructive surgery of the hand in leprosy and that is a sublimus transfer operation. Here the sublimis tendons of the ring and little finger (or the little finger alone) are split into two, thus saving the ring finger sublimis for a possible thumb reconstruction, should that be necessary. After detaching from the point of insertion and bringing them out to the palm, by a separate incision, they are then guided through the lumbrical canal and attached by suture on the radial aspect of the extensor expansion on the dorsum of the fingers. It will now be observed that the transferred tendon has been now manoeuvred to take the same course as the lumbricals and hence lumbrical action is restored. It follows then that the meta carpophalangeal joint can be flexed and the proximal interphalangeal joint extended as these functions are previously those of the lumbricals. Loss of abduction and adduction due to loss of interrossei action does not matter as they are compensated by the movements of the extensor tendons of the finger. In the little finger this com-

pensation is very weak and to offset this the sublimis tendon for the little finger in the above operation is attached on the ulnar aspect instead of the radial when the little finger can also be made to abduct completely.

When a pure median nerve paralysis occurs in leprosy the site of involvement as said before is at the level of the wrist and it follows that the paralysis affects the points of supply distal to this. Thumb function and lumbrical action of the index and middle fingers are consequently lost. The thumb rolls over to the plane of the palm and is adducted. The index and middle fingers assume the same position as in ulnar palsy i.e. extension of the meta carpo phalangeal joints and flexion of the proximal and terminal interphalangeal joints. The object of reconstructive surgery in the pure median nerve paralysis is then two fold ; to restore action of the thumb both abduction and opposition which are lost and to restore lumbrical action to the middle and index fingers. Restoration of thumb function has involved the use of numerous procedures but the most satisfactory procedure upto date is the technique recently evolved by Brand. In his operation a free tendon graft, the palmaris longus tendon, is taken after it is stripped from its muscle belly and using the flexor carpi radialis, the grafted tendon is tunnelled across the palm and brought out on the radial aspect of she thumb and sutured to the extensor pollicis longus at its insertion. The right length of the graft and right tension are necessary to produce the necessary abduction and opposition. If these two precautions are observed the results are very good, thumb action being completely restored except that in opposition there may be a slight jerk and action may not be smooth but this is soon got over with time and post operative exercises. When the palmaris longus tendon is congenitally absent as it may happen in a small percentage of cases it is then obvious that this operation cannot be performed. Other sources of free tendons must then be considered. These may be the plantaris tendon from the leg or the short extensor tendon of the toes from the dorsum of the foot. Another alternative is to use sublimis tendon of the ring finger and either use it as a transfer or as free graft in which case the flexor carpi ulnaris is used as the power.

In a mixed ulnar nerve and median nerve paralysis the deformity is complete. The thumb lies at the side of the palm all the fingers are extended at the metacarpo phalangeal joints and flexed at their interphalangeal joints, both proximal and distal. Bunneel describes this deformity as the intrinsic minus' position of the hand. The opposite of this is the intrinsic plus deformity where the metacarpophalangeal joints are flexed to right angles and interphalangeal joints both proximal and distal are extended. Pathologically the ' intrinsic plus ' position is seen only in one condition and that is Duputryn's contraction affecting the intrinsic muscles of the hand leaving the forearm muscles free.

The object of reconstructive surgery in leprosy is to reverse the deformity i.e. to convert the ' intrinsic minus ' to the intrinsic to the ' intrinsic plus ' position. By position is not meant deformity, so what is actually meant is that the hand in a fixed intrinsic minus position now can at will assume the intrinsic plus position or in other words be capable of assuming the function of the grasp. Grasp is both a fundamental and a primary function of the hand. In leprosy the function of grasp is entirely lost where both ulnar and median nerves are paralysed and partially lost in pure paralysis of either type. The patient is no longer able to make a fist. When the patient with his hand in the intrinsic minus position is asked to grasp a spherical object there is no hollow in which this object can enter, due to flattening of the thenar and hypothenar eminences and the fingers in attempting to grasp the object only abut against the object with the the dorsum of his flexed fingers. In other words the hand is no longer capable of grasp. It can only perform a hook action or at the best the patient can hold a bucket handle or some

similar object which can enter the space between his palm and his flexed fingers and this explains the callosities and trophic ulcers seen on the dorsum of the fingers of the patient which he acquires in his efforts to grasp the many objects with which he comes into contact in his daily life. In order to restore grasp his fingers must now be opened out and his meta carpo-phalangeal joints flexed to deepen the palm and allow the fingers to encircle an object. The only way in which this can be done is to reverse the intrinsic minus position to the intrinsic plus position and the only way this can be done is to restore the lumbrical action, the intrinsic plus position being not a fixed deformity but capable of being assumed by the patient's action at will.

To understand the why and wherefore of this, one needs to consider the phylogeny of the hand. The hand though so highly developed in the human is a primordial organ and finds its earliest representation in the fore fin of the primitive fish. The arm and forearm were later developments for adaptation to a terrestrial existence. Pandactylism too is an early feature. In the development from fish through amphibians to man the multirayed fish is reduced to the pendactylate type and the independent muscle action of the rays of the pectoral fin is possible only by what is really the analogue of the intrinsic muscle of the hand. Thus again we observe that of all the muscles of the upper extremity the intrinsic muscles of the hand are primordial. One has only to compare the pectoral fin of fish in an aquarium and note the similar versatility of movements between its fins and those of the hands of a pianist or any skilled craftsman to appreciate this point.

If the intrinsic muscles, action was an early possession, what then became further necessary for the human hand to reach its present status ? Three additional refinements were necessary : the first was reach. Food and defence against an enemy were particularly necessary for the survival of the species. To reach for food and attack or defend against an enemy. lengthening of the limb became necessary and this was contributed by the development of the arm and forearm. The second refinement was range of movement and this was achieved by the development of the shoulder, augmenting the function of the hand as an effector organ to grasp. The third refinement was development of power. A hand capable only of fine movements but without power was useless. How then was power augmented in the hand ? In the amphibian it is found that the intrinsic muscles are already highly developed and have sole control of the digits. As yet no forearm muscles move the digits, all extensors and flexors of the digits being of the brevis type and their origin not reaching above the corpus. In the reptiles one finds that the first attempt in distal attachment is made in that only the flexor profundus has joined the intrinsic muscles across the ligament. In the subsequent gradation to mammals the forearm muscles lose their tendinous attachment at the carpus and loosen themselves to be continuous with the brevis muscles in the hand. This resulted in the development of the only extensors and flexor sublimis and profundus in man which now control our digits from the forearm. Power to grasp was thus augmented. However as a result of these developmental changes the following anatomical situation has been created :

1. The wrist is flexed by two forearm muscles : the flexor carpi ulnaris and the flexor carpi radialis which have retained their carpal attachments.

2. The proximal interphalangeal joints are flexed by the forearm muscle, the flexor digitorum sublimis.

3. The distal interphalangeal joints are flexed by the forearm muscle, the flexor digitorum profundus.

4. The meta carpo-phalangeal joints have no true flexors :

There are no muscles with a proximal origin and an insertion just distal to the joints. How then are these joints flexed? Two arrangements have been made available

(a) The long tendons of the sublimis and profundus in passing across the joints from their point of origin to their point of insertion flex these joints but this action is extremely feeble.

(b) The lumbricals from their point of origin in the palm pass in front of the joints and then through the lumbrical canal to their attachment to the extensor expansion on the dorsum of the fingers. The meta carpo-phalangeal joints are situated somewhere in the centre of the line of the lumbricals and by the latter's action they are flexed.

From this it is easy to understand the result of loss of lumbrical action. The meta carpo-phalangeal joints become extended because the sublimis and profundus tendons cannot flex them against the more powerful opposing action of the extensors of the fingers and these become flexed at the proximal and distal interphalangeal joints or become clawed because they cannot extend against the powerful opposing action of the digitorum sublimis and profundus. Thus it will be observed that a delicate balance is maintained by the flexor and entensor group of muscles and the slightest mishap such as a lumbrical paralysis throws the whole hand out of gear and converts a highly useful specialised organ into a useless appendage.

The logical approach to this problem is to restore lumbrical action. For all practical purposes in pure ulnar and median nerve paralysis the simple sublimis transfer operation achieves this. But when this operation comes to be applied to combined median and ulnar paralysis, it fails. How it fails and why it fails are explained as follows :

(1) It is a fundamental principle in tendon surgery when replacing lost action of any muscle, to use a muscle of similar action and of the same power. In the sublimis transfer operation a flexor is converted into an extensor of the proximal inter-phalangeal joints and more so a long powerful muscle now acts instead of a small thin muscle with very much less power—the lumbrical. The result of this is an exaggerated action of the transferred muscle causing not just extension which is desired but hyper-extension and this is further exaggerated by (2) division of the the sublimis tendon. For long sublimis tendons were thought to be dispensable and their division on removal caused no untoward effect. But Rank and Pulvetaft have recently shown that sublimis is a separate unit by itself & the integrity of the tendons is essential for the retention of power. Their division tends to make the power weaker and this can be well understood on the phylogenetic grounds as explained in the foregoing paragraphs. With the power reduced, the tendency to hyper extension is further augmented. In other words the sublimis transfer operation fails by substituting one deformity for another. While the effect is not so well seen in the transfers in pure ulnar and pure median paralysis the effects are clearly marked in combined median and ulnar nerve paralysis. Brunnell by whose name this operation goes does not mention this and the conclusion is that he did not have these effects in his patients. But Brand who has tried this operation extensively on his patients has observed these effects in his patients, after long followups. What then is the reason for the disparity between the results of these two workers, one the originator of the technique and the other its greatest exponent. Brand again provides the explanation for this. The mobility of a point depends on capsular tension which varies from individual to individual. There is also a racial difference. Thus in Brunnel's patients who were all of European or American descent the joints are less supple than in the Indians and so the tendency to hyperextension in a sublimis

tranfer is little or not at all there due to capsular tension whereas in the Indian with his supple joints the tendency to hyper extension is marked.

That the Indian's wrists and fingers are supple to an extreme degree has further support, as Brand believes, in the difficult art of Bharatha Natya. Here complicated and intricate hand movements are necessary and their execution depends only on the degree of suppleness of fingers and wrist. In no other form of dancing in any other country do you get the same hand movements as in Bharatha Natya. The only other country where similar dancing, so far as hand movements are concerned is Indonesia but here again this can be traced to early Indian influence. Other evidence of extreme suppleness of the wrist and fingers of the Indian lies in the field of sport. World supremacy in hockey has been held by Indian players for many years. The reason is not difficult to find. The Indian plays a type of hockey totally different from the rest of the world. When the British introduced the game into this country, it was of the hit and run type. The Indian with his native genius quickly adapted the game to his own natural qualities and his present mastery rests mainly on effective ball control. Anybody who has handled a hockey stick knows it is a most unnatural implement. You give it to a novice and he does not even know how to hold it. It takes suppleness of wrist and fingers to control the ball with it and to gain mastery. In the game of cricket too the Indian has left his impressions. Anybody who has read A.G. Gordiner about Ranjitsingjhi knows how the latter brought with him a new mastery as was never seen before. It was with Ranjitsinghi that were born two of the finest strokes in cricket the leg glide and the late-cut. Any average Indian cricketer can execute these strokes and the only exponent of this who can perform them with equal facility belongs to another coloured race the West Indians. In saying this only the general rule has been stated and not the exceptions as they are bound to be present,

The above arguments have been put forward to show why the sublimis transfer fails in the Indian patients. Brand who pioneered in this field soon found after wide experience and a careful followup of his cases that while for practical purposes the sublimis transfer operation sufficed for pure ulnar and median nerves paralysis it was a distinct failure in combined median and ulnar nerve paralysis for reasons stated above. This provoked him to some deep thinking and recently he has evolved another operation which satisfying the fundamental requisite of replacing lost lumbrical action has none of the defects of the older technique. Brand in his operation employs the plantaris as a free tendon graft. He uses the extensor carpi radialis brevis as the power. Briefly the dorsal aeuponeurotic space is opened by a curved incision over the dorsum of the hand and wrist, the extensor carpi radialis brevis divided at its tendon at the point of its insertion and levered out. The cut end is then attached lo the proximal end of the free graft the length of which is judged. The distal end is divided into four tails. Each of the tails is taken through an interrosseous course and they are guided through the lumbrical canals and attached to the extensor extension of the fingers on the radial side except for one which may be attached on the ulnar aspect of the little finger to further correct ulnar deformities.

Brand's operation as it will be observed is theoretically sound and a much more logical operation than the sublimis transfer. It corrects the deformity and restores function without interfering with any other muscle or tendon which acts on the same joints. This operation is a distinct advance in the surgery of hand reconstruction in leprosy.

THE FOOT—

Apart fram trophic ulceration which is a separate problem by itself in leprosy,

paralytic deformities arise as a result of gross interference with nerve function. Deformities by themselves cause trophic ulceration and for this reason alone call for correction.

In the lower extremities the nerves involved are the lateral popliteal and the posterior tibial, the medial popliteal being spared. The resultant deformities are a foot drop, a side ways—drop due to peroneal palsy or a clawing of the toes. We will deal with each one of these deformities,

(a) Foot drop : Like wrist drop this may appear acutely as in atypical cases. The usual form is to present itself insidiously. When it presents itself acutely the attitude is one of conservatism as function is most likely to return with specific and anti-reaction treatment. When this does not take place and in the insidious forms, reconstructive surgery will have to be considered. Foot drop is a disability that interferes with locomotion. Bilateral foot-drop when it occurs as it may do so sometimes in leprosy is a disability which causes severe distress to the patient. Such a patient is a pathetic sight. He has to put in a lot of effort to achieve very little. The patients often express themselves in the words : ' I feel as though I have walked a mile to find that I have walked only a few yards. ' Fortunately in leprosy only the posterior tibial nerve is involved after it gives off its branches to the gastrocnemius, soleus and tibialis posterior—This enables the surgeon to make use of the tiabialis posterior for a tendon transplant operation for the correction of a foot-drop. All foot ulcerations must be healed before the operation is attempted. This is achieved by prohibition of weight-bearing and correct local treatment. The patient is then got ready for surgery. In as much as an invertor of the foot is going to be converted to act as a dorsi flexor the patient must first get used to the idea so that later on by muscle re-education and by a cerebral association of muscle actions he will be able to use the transplanted muscle as an efficient dorsi-flexor. This is achieved in the following manner : He attends a physiotherapy section or if this is not available, under the direct supervision of the surgeon himself, he is asked to perform the following exercises. He sits on a stool and crosses the paralysed limb across the other. A light sand bag is slung across the mid-dorsum of the foot and he is asked to invert the foot with the suspended sand bag. He is instructed to repeat this till fatigued. This exercise is repeated daily or as often as possible until it is well impressed on the patient's mind. The operation is then carried out. The tibialis posterior is detached from its insertion re-routed either subcutaneously or through an interrosseous route and brought out to pass in front of the ankle-joint and inserted into the middle cunieform bone with a stout stainless steel wire. The foot is then inmobilised in plaster in an exaggerated dorsi-flexed position for about 3 weeks. At the end of the period the patient is instructed to walk keeping in mind that in order to dorsiflex he has to perform the old action of inversion. An intelligent patient quickly establishes cerebral association of muscle actions and assumes normal locomotion within a short time. This is again an operation recently devised by Brand and the early results have been excellent.

(b) Partial side-ways drop : Here the peroneal muscles only are paralysed and the foot drops with the lateral edge dragging on the ground. A tendon fixation operation corrects the deformity. The Peroneus Brevis is used and a tenodosis is performed whereby the lateral edge of the foot is lifted and suspended from the fibula.

(c) Clawing of the toes :—Correction of this is by :—

(1) in the early stages by transporting the long flexor tendon of each toe to the dorsal surface of the proximal phalanx of the same toe.

(2) in later stages where joint rigidity has set in, arthrodosis of the interphalalgeal joints correct the deformity.

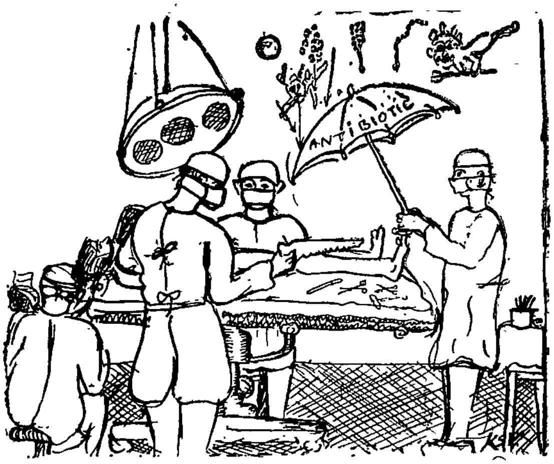
This article has been written in the hope that it will stimulate the minds of those young readers, the undergraduates of this college by whom it will be read most so that they may evince a wider interest in leprosy with its varied problems. Leprosy is a disease which is very much with us. It afflicts many of our countrymen. There is great need for all types of workers. Research demands specialised workers such as bio-chemists, pathologists and bacteriologists and such others. I will say no more than to close with what Mahatma Gandhiji said : "They are as much a part of society as the tallest among us but the tall absorb our attention though they are in least need of it. Study of the lot of leprosy patients who are much in need of attention is neglected. If India was pulsating with new life, if we were all in earnest about winning independence in the quickest manner possible by truthful and non-violent means, there would not be a leprosy patient in India, uncared for and unaccounted for ".

Acknowledgements :—

I wish to take this opportunity to thank Dr. P. W. Brand for having helped me to observe and study his hand surgery service and the ancillary sections during my short period of deputation to Vellore in February, for his illuminating and instructive demonstrations and discussions and lastly for his kindness and hospitality.

I wanted to be a doctor that I might work without having to talk.

—*Albert Schweitzer.*



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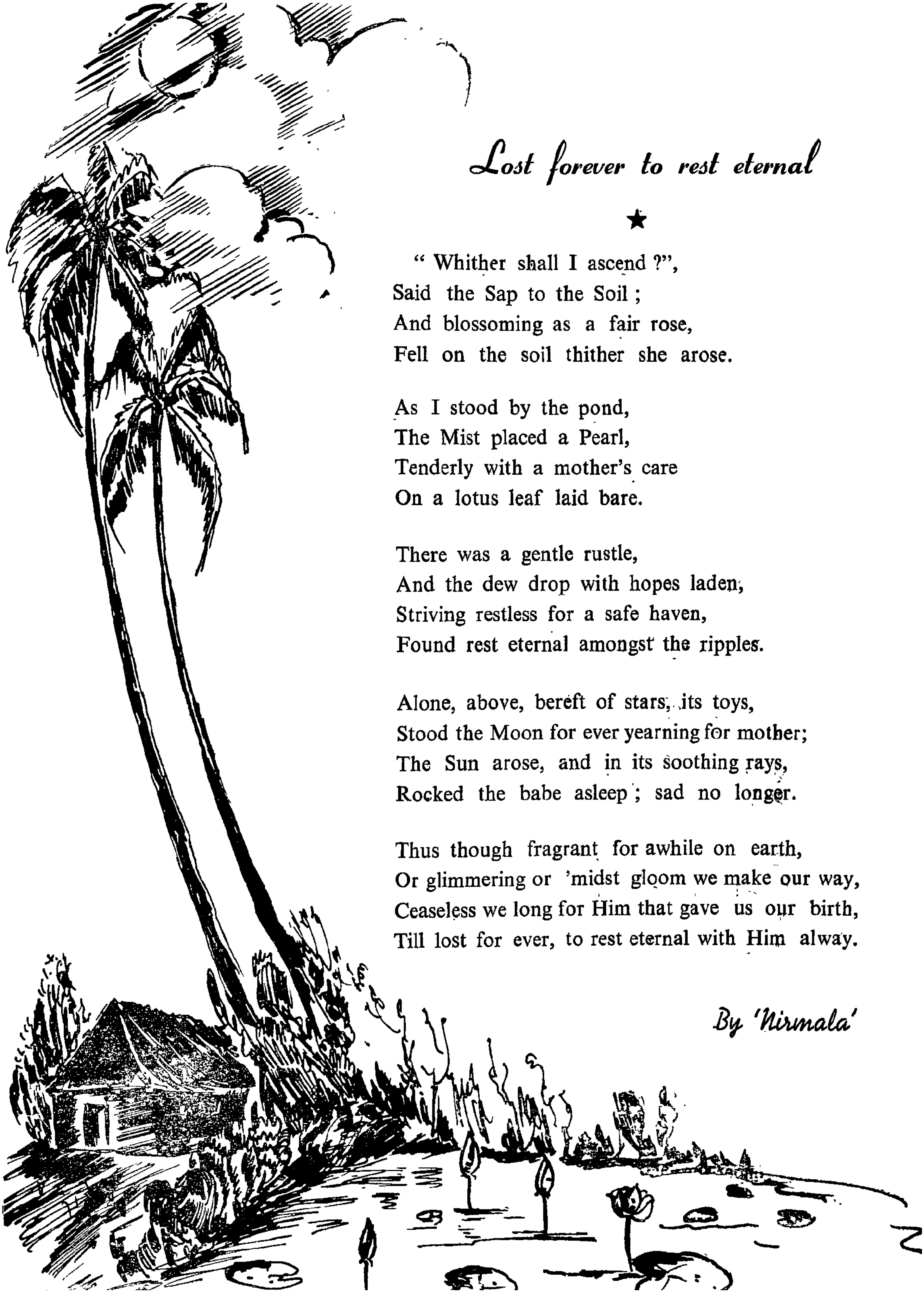

Lost forever to rest eternal

★

" Whither shall I ascend ?",
Said the Sap to the Soil ;
And blossoming as a fair rose,
Fell on the soil thither she arose.

As I stood by the pond,
The Mist placed a Pearl,
Tenderly with a mother's care
On a lotus leaf laid bare.

There was a gentle rustle,
And the dew drop with hopes laden,
Striving restless for a safe haven,
Found rest eternal amongst the ripples.

Alone, above, bereft of stars, its toys,
Stood the Moon for ever yearning for mother;
The Sun arose, and in its soothing rays,
Rocked the babe asleep ; sad no longer.

Thus though fragrant for awhile on earth,
Or glimmering or 'midst gloom we make our way,
Ceaseless we long for Him that gave us our birth,
Till lost for ever, to rest eternal with Him alway.

By 'Nirmala'

THE UNICORN'S HORN

During medieval times, and even later, the Unicorn's horn was considered to possess miraculous powers of healing and preventing diseases. The horn, though said to be derived from the mythical Unicorn, was in all probability a piece of ivory, and was sold at a fabulous price. The extravagant cost confined its use only to royalty and the nobility, and kings often kept a piece of the horn handy to dip into their cups before drinking, as an antidote to poisoning.

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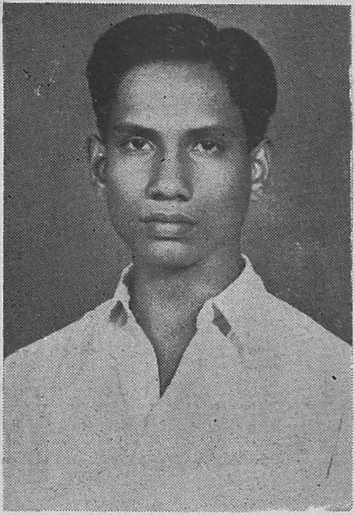


MR. S. GOVINDA BHAT

Mr. S. Govinda Bhat, son of Mrs. & Mr. Subbanna Bhat was born on 2nd October, 1937.

He ranked first in his College in the Intermediate Examination and joined the Stanley Medical College in 1954.

As a student he was a favourite among the staff members. He was outstanding, indefatiguable and had an immense love for learning. He had the unique honour of obtaining the certificates of merit in all the subjects thus far. He won the gold medal in pathology and was awarded the prizes in physiology and ophthalmology.

As a member of the N. C. C. he proved himself loyal and promising and was promoted as a lance corporal.

As a friend he had a lovable character that endeared him to all his acquaintances. He was jovial, unassuming and was one among his friends and never above them.

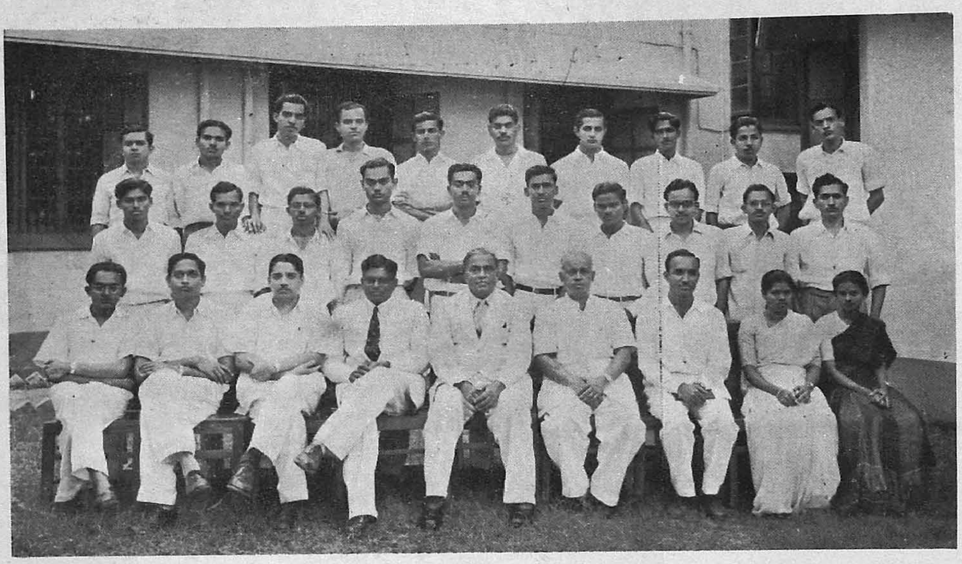
After a brief illness he became unconscious on the very morning he had his opthalmology examination and never again recovered. He passed away on 4—12—1957.

He is gone and never must return.

" None can fill the empty frame "; nor can we ever forget him,

May His Soul Rest in Peace.

RURAL MEDICAL AND SOCIAL SERVICE LEAGUE - 1956-57



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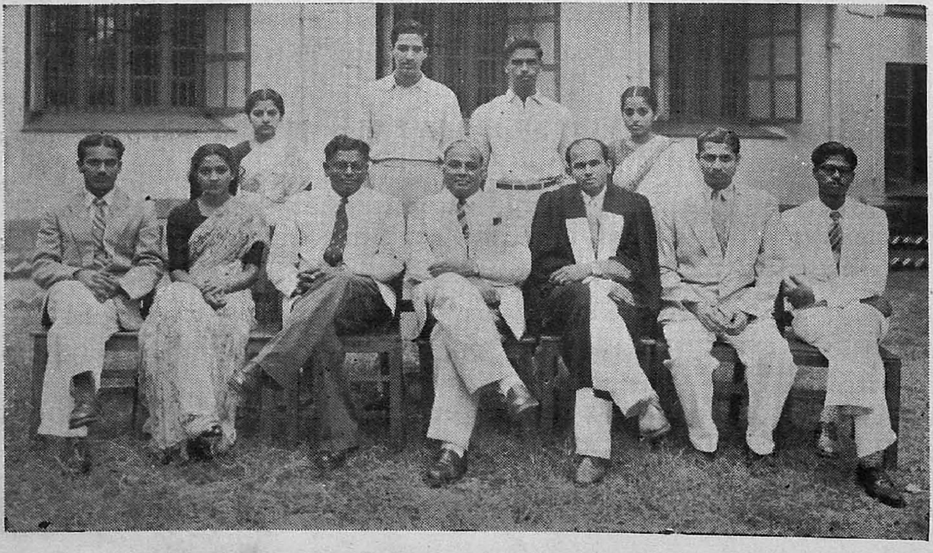

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" His uncle whipped him, his aunt cursed him
and the neighbours chirped in,
" That boy ! He is full of evil."

JAGDISH

BY

E. THEODORE KING, *4th Year.*

When Jagdish's mother died, Jagdish was only seven years old. His father had died when Jagdish had been born, and now with the death of his mother, he became an orphan.

There was a little weeping and wailing over the corpse. His father's brother, Ethirajan, and his mother's sister, Saraswati, groaned and moaned, and after the cremation, they settled down to quarrel. Who would bring the boy up ?

Ethirajan was already burdened with two self-willed sons and a vain daughter. Saraswati had a family that seemed like a train. Since both of them were close relatives, they blamed one another for not bothering to take custody of the boy.

Finally, Ethirajan agreed. Agreed reluctantly, angrily. He had a hard wife, Shanti, to contend with, and he had not much land. His late brother had been such a fool and a gambler, and had lost what little he had, in sowing wild oats. There had been no love between them and yet he had to bring this Jagdish up.

He let the boy into the house and let him eat and drink and sleep there. He let him live in ease for a week and then set him to work. He was made to bring hay and pile it up before the buffaloes, made to water them, and every day, take them out for grazing. His two sons, Raman and Lakshman, named after the epic heroes, a little older than Jagdish, went to the village school and came back every afternoon, filled with a sense of pride and superiority complex. The daughter, Draupadi, was a wayward girl, always going from one neighbour's house to another, gossiping and spreading scandals and rumours. She was the eldest and four years older than Jagdish, and regarded Jagdish with contempt, and sneered at him always.

Jagdish grew up among people who didn't want him and thus he grew to shut himself in a shell. Any mischief that Raman and Lakshman indulged in was attributed to Jagdish, and his uncle whipped him and his aunt cursed him. And .he neighbours would say, " That boy ! He is full of evil."

Sometimes Jagdish did get into some mischief. He was a boy and boys always were a little wild and playful. But he did not reckon witn his two cousins. He was alwas fighting them.

He would find a wounded bird and nurse it and make it a pet. Hungry for companionship, he would make the bird a companion. But Raman and Lakshman would steal the bird and kill it and cook it. He would set upon them and fight them, and together they would batter him. And when they told their father, Ethirajan would whip Jagdish more, and Jagdish would lie down in the cowshed, too weak even to moan.

Or, he would collect shells and preserve them, shells of different sizes and colours and shapes, intending to make something

artistic out of them. And one fine day, he would find the shells gone and Raman would mock him and Lakshman would jeer. He would fight them again but what was the use ? He was always at the receiving end, and was always badly beaten.

There were other incidents where the cousins always stole Jagdish's things and beat him in the bargain. And always the neighbours would chirp in, "That boy ! He is full of evil."

Then Jagdish began to grow up and his uncle stopped him from grazing the cattle and sent him into the fields, and Jagdish laboured from dawn to dusk. There was no particular pleasure in doing the work for his uncle, who growing old, would abuse him worse, and his aunt would torment his life. Draupadi had been married lately but she stayed more at her father's house than at her husband's. Raman and Lakshman had drifted to the city and were studying in some high school. They usually returned home for holidays and the whole village would be agog with their arrival, their big talk, their erudition. And they would tease Jagdish and call him any name they pleased and their father would say that city people always had a natural inclination to look down upon the villagers.

It was when they next came that they were surprised to know that Jagdish was to be married. In the city, they told their father and the neighbours, a man didn't marry till he was 25, when he was considered a man, but in a village, even at the age of 18, a man wanted to live a family. It was ridiculous. But everyone said that life between a village and city was different and they had to follow the ways of their fathers, and the fathers of their fathers, and their fathers of their fathers. But what shocked them was the girl. She was Kamalam, and quite a beauty.

There was not a youth in the village who did not lust after her but she kept them off with a father who towered like a giant and fought to kill. She had a tall, sparing figure with a beautiful body. Every curve and line had been designed by a cunning hand. Her eyes were big and soft and warm with feeling. Sometimes they coquetted, but it was a pleasing kind of coquetry. Her mouth was red, full and tender, like a storehouse of blood, flushed with the excitement of growing fulness. The cheeks bubbled with the zest and zeal of youth and made her look like a ripe peach.

The cousins could not believe that she could have liked Jagdish and that her father had agreed to get her married to an orphan.

"Jaggu is a sly fellow," Raman told Lakshman mirthlessly, as he saw Kamalam go to the village tank with her vessel to get water. But in his eyes there was a hardness, a fierce lust.

"A pretty girl," Lakshman said. Jaggu had been doing all the flirting behind our backs. It we were here, we might have got her."

And soon the marriage pipes played and Jagdish married Kamalam and went to live with his in-laws.

A few months later, Kamalam's father went to Tirupathi. Kamalam kept house and Jagdish felt at liberty with himself. He put his chest forward and went to the fields with a song in his heart. He felt as if he had been freed from bondage. He would not hear the old man growling for a while and he had nothing to feel afraid of. He laboured with joy, and with the love of Kamalam, he lived a life of love and peace.

But it was, again, short-lieved. Raman and Lakshman had come back from their schooling and the village went gaga over them. Now they were going to college. And they shouted it at the top of their voices.

Jagdish felt small before them. They still mocked and teased him and the only defence he had against them was a tight pursing of the lips and a cold look in his

eyes. They often came to the fields to see how he worked and made him look foolish commenting on his ignorance and stupidity that made him soon lose the little joy he had in his heart.

He tilled the fields because the rains would come any day now, and he was ready for them. He began to sow the seed. The work took him all day and he left early to return late. And Kamalam brought his food in the afternoon and he ate and satisfied himself, and sometimes she brought the gossip of the village and told how Raman had greeted her and Lakshman had called her a sweet sister-in-law. Jagdish heard and a fear grew in him and he hoped his brothers wouldn't harm him now, but he kept his fears to himself.

Then one afternoon, she did not come. He worried. He was hungry and she should have been there by now but still she had not come. He waited for her and when she still did not come, he threw down the bag of seeds and hurried home.

She was in the house, lying on her cot, rather sick. There was a dull look in her eyes, a dull, mutilated look that averted as he entered in.

"I was hungry," he said. "You did not come and I worried. I came. Why did you not come ?"

She did not answer him. He went up to her and turned her towards him.

"Don't touch me," she screamed violently, suddenly. "Dont come near me."

He drew back, shocked and hurt.

"Is something wrong?" he asked her tenderly.

She looked at him with eyes of hate and he feared for her. She seemed to despise him. He bent his head and whispered, "Have I done any wrong ?"

"No," she said dully, the eyes becoming soft and tender.. 'I am not your wife anymore, Nevermore can be your wife. I have been polluted."

He looked up at her. The eyes were hard and stared with a steady gleam.

"Who polluted you ?" he asked thickly.

"Raman and Lakshman."

He rose and stood like a rigid pillar of stone. He balled his fists and his mouth pursed to a thin line. The eyes looked ugly and there was cruelty in them. His heart cried out for vengence. They had polluted his wife, the only thing he ever loved. He remembered the days when they stole his bird, his shells, and other things. He remembered how they beat him and how he had whimpered back defeated to the cowshed. His body sagged. What could he do ? They were strong. They had stolen his honour, polluted his house.

He dragged his legs from there and went towards the fields. There was a dull pain in him, a pain of helplessness and anguish, and now and then he smothered a sob, but the tears flowed down his eyes and he would not wipe them. He did not seem to have the strength to do it.

When he came to the fields, he saw the two brothers there, grinning at him.

"Ho Jaggu, where did you go ? we were waiting for you ?"

Jagdish did not speak. He wiped his eyes with his brown arm and stared at them. A rage slowly whelmed within him. His eyes became hard again. They were no longer the eyes of a man : they were the eyes of a wounded animal, and there was murder in them. Raman and Lakshman saw the eyes and grinned but there was no mirth in them. They suddenly looked afraid.

" What were you waiting for ?" Jagdish asked softly, but there was an under current of tenseness in it.

" We are going to college. We came to say goodbye. "

They moved and came down the small mound they were standing on. Jagdish stood in the path they had to take.

" Why did you go to my house ? " he said He knew it was a silly thing to ask but he had asked it and felt their fear and smiled.

" Oh, we went to see Kamalam. We went to wish her goodbye. She is our sister-in-law, yow know."

Then something snapped inside Jagdish. He sprang at Raman and grappled with him. Lakshman took to his heels and ran towards the village, stumbling and shouting Jagdish beat Raman and went on beating him, all the pent-up hatred pouring out, and Raman lay bleeding but Jagdish went on beating him and though Raman was dead, he still beat him till his limbs tired. He sat back and wept, covering his face, weeping sickeningly because he did not know what he had done and what to do afterwards. The pain was gone out of him but a dizziness held him and he rocked and swayed. Then he heard a patter of feet and loud voices and he looked up dully and saw the villagers rnnning towards him, brandishing their sticks.

They found Raman dead and Lakshman told them how Jagdish had done it. They swung their sticks on Jagdish and dragged him but Jagdish did not care. He just kept repeating, " They polluted my house," but nobody cared to hear him or understand him.

They took him, a badly, broken man, physically and mentally. He could only say, " They polluted my house, " for every question they asked, and they saw that he was completely demented.

But the neighbours gathered and said, " We knew it would happen. He is full of evil. That fellow from the beginning was full of evil".

Discontent :

There are three things with which a man should not be content : with his opinions, with his character, and with his spiritual condition. Not content with his opinions, he will continually increase in intelligence ; not content with his character he will ceaselessly grow in strength and virtue ; and not content with his spiritual condition, he will, every day, enter into a larger wisdom and a fuller blessedness.

—James Allen.

Once we cling to Love, it lifts us from the plane of ephemeral pleasures of an illusory phase of life to an immortal world..................................

"What men live by"

BY

" SUSI "

Instincts, sentiments, imaginations and a thousand passions and feelings that throng the mind of man, together with the physical world, speak for the world apparent. And if the world is what it is, the hearts of men must answer. In this experience of cold logic, unrelenting laws, stubborn facts and the threadbare orderliness of cause and effect, if there is a colour, Love renders it. Love is the luminous gift which lying over the heap of vices and virtues that the frail human frames manifest, overshadows them all, to make us what we are. It is a lamp in the dark life. It is a jewel in crudity, like the moon in clouds. Cut and polish it ; it out-shines a thousand suns ! Love can change with many a shape and name as it leaps from heart to heart—but die it will never ; for, without love there can be no life. Even the wickedest mind must have its own corner for love.

Look, the mother fondles her babe. In her blindness and a pleasant thoughtlessness, she talks to the child, looks, listens, laughs and finds pleasure in fooling herself. Sages may not in their meditation quite cast off the faint murmurs of their minds, but the mother forgets even herself in the devotion to her little " despot ". Submerged in the flood of light that springs from the two dark little eyes, spell bound by the charm of that sculpture with the clamour of a tongue and thrilled by every smile that flashes between the toothless gums, she goes mad and makes a childish fuss that takes strangers by surprise. The burly little thing with the lotus face, leaf-soft lips, rosy cheeks and the floral feet is innocence personified—God in the guise of man, the symbol of beauty and grace and the bugbear of finite words for description. And the love of the mother is loving self and yet without selfishness.

But what is it that benumbs my senses when my darling sister dotes upon me ? She clings to my back, clasps me fondly tight, slaps my cheeks and gives me a forced kiss. She smears me all over with love and carries me high above the earth and I madly fly in a fantasy-world. She jigs and ambles, giggles and lisps and fools me with her prattles. O her thousand faces, dances and antics...... ! I will risk the world and get lost in the madness of the joy. She sits biting her finger when I am not with her and behind her swelling face, stead-fast, wistful eyes is hid an unfathomable realm of grief and beguilement. Trackless deserts interpose between us, and at times when the hallucination of her lisping tongue spurs my mind, I water my pillows with tears of joy. It's all blind Love, the ever-soothing never-dying Habit, a medley of sorrow and joy.

Then comes friendship, another flash of beauty from the diamond Love, that has left many a lustrous relic inaccessible to the chilling hands of Time. It has built the lofty rhymes that fill us with rapture,

> " My friend, the brother of my Love ",
>
> " Dear as the mother to the son,
>
> More than my brothers are to me ",

cries a soul in anguish and mourns for a hand that can be clasped no more. He finds a vacant chair and looks for the sound of a voice that is still. He craves for the

touch of a vanished hand and weeps, "How good ! how kind ! and he is gone." He is gone and never must return. Friends are two vagrant spirits that by chance or fancy touch, and tie them up to each other ; 'friendship is never made, it's recognised.' It is the identity of souls A friend when hurt or smitten goes to the other to seek solace and they soothe and cheer up each other. They form a glowing brotherhood ; "Friendship—it is to be as brother and sister, two souls touching each other without uniting, like the two fingers of the same hand."

And now leave alone the rest, and diving deep into the heart of hearts make a search. There is a throb, a thrill and a strange experience. O the pain of Love ! "It can change the sternness of a saint and the coldness of a maid" It is to blend life with life, fuse heart with heart, the "realisation of freedom through bondage." And the lovers forget the temporal world and the evanescence and the absurdity of things. They build a bower sublime in the clouds of love and dwell in subtle joy. But joy is often strewn with pits of sorrow, and yet sorrow is not sorrow there ; it is sweetened with joy, only to serve as the foil to brighten the gem of Love. "They never learned to love, who never knew to weep," It is sweet with sighs and the eyes in gloom only sparkle with added light. It makes heroes out of cowards. The quickened spirit delights and dances ; it may assail people with an Orpheus' music or may dash against an Anarkali's grave as Salim did. The blade of caste and creed and such base inventions of thoughtless men does at times mercilessly bleed many a heart and the blood clots to set graves to lover. Laila, Laila was all the life breath of a Kais, and his heart could bear a thousand pelting stones, but the thought of losing her would blast him to pieces which then accumulate to cast a Majnu. And drunkard Devadas would fill the destroying bowl to dispel himself from a world without Parvathi. Love is immortal, its sublimation is the union of souls—flesh, the world might destroy, but love endures.

And thus Love starts at home as blind and instinctive and grows in all measures, thick and wide, sprouts as love for sex and puts forth flowers unnumbered. But at length it stands supreme as love for fellow men. Once we cling to love, it lifts us from the plane of ephemeral pleasures of an illusory phase of life to an immortal world. Yes then,

> "Mighty love sways all alike,
> From self to selflessness."

The film of tear that blinds our eyes as we peep through all the frippery into reality, namely misery, is the true token of selfless love. The measure of love is what one is prepared to sacrifice for love's sake. But tenderness there without the capacity of relieving only makes us more wretched than the object that deserves. It is this human milk of kindness that froze to form a Buddha, a Gandhi and a Jesus. The prince turned a mendicant, the apish lawyer a "half-naked faquir" and the great king of men gave his life blood to wet the thirsty hands of those beastly mortals, though he would only utter. "Father forgive them, for they do not know what they do." Loving all is loving none and that is the perfection of it ; and off with it snaps the narrow shell of race, religion, country, language and artifice, so many.

Love is the law of life, the core of humanness and the one secret of existence; "the ultimate meaning of everything around us. But one should love for love's sake, for, there can be no trade in true love, an it is this that men live by.

THE WENCH

BY

T. S. RANGANATHAN

Spring came up again ; but all nature seemed in a rage. The days were almost shrouded by dark clouds and the nights were dry with piercing cold. Sethu did a still life within the four walls of his apartment, his mind restless and wandering in great commotion. Nights he spent on the stage as the main hero of the play; his drama troop was playing at Parur. He was moulding a piece of clay vaguely as his fingers fiddled over it. These fingers though of a poor peasant boy had the magical power in them for they could create any life like statue out of the shapeless clay.

As Sethu withdrew his fingers from the piece of the wet clay, there stood his school master, with his unchanged classical attire and the usual grin on his face. Sethu stared at the figure and brought forth a sickly breath, for the school master, who had the greatest power to fathom the talents of every one of his students and predict their future with accuracy. He could very well remember and recollect how often he used to reiterate that study was far from Sethu and he could as well join some drama company. Sethu wondered how those very words of his school master had come true.

His thirst for love cried out to Malu, but the mirage of temptation tantalized him and instead of quenching the thirst blotted it outright.

Sethu passed his fingers over the figure at random and he withdrew them; a few minutes later there stood Malu calmly with hands on slim and alluring hip surveying him with hilarity. Malu was the favourite girl of his drama company; she was a peasant girl. She had the lovely features of a rough peasant woman filed down and chiselled away to delicate proportions. Her hair was neither blonde nor the raw red of her country woman, but a glorious intermingling with a glowing warmth. Her eyes were deep blue dancing to the joy of life, her full lipped mouth was slightly open. Her voice had a tingling lilt and her steps had the grace of their own—in short she was the tempting figure of that drama company, and lured every one of the party and aroused a desire in them to possess her their own in ways they designed to themselves. But as for Malu, it was hard to say whom she liked and dotted most in her heart or whether she liked anybody at all ; for she just nodded her head politely to some as they tried to talk to her, for others she just curled her lips and threw a conceited smile and yet for another group of friends she unveiled her lips to the full till all her teeth were shown out and laughed with delight. However this odd behaviour of her grew a false desire in every one of her friends and each one of them cherished a fond hope in him that he was that fortunate one whom Malu loved most.

Sethu was soaking up her beauty with a passionate thirst, but in a remote portion of his mind there was a dull aching thought, he could not understand why Malu disliked him so. He was an artist to the core. He was a veteran songster and a dancer. His fingers were multi talented. They could raise music from any instrument. They could create life like statues out of the shapeless earth. But Malu little seemed to appreciate any one of them. All that he longed was that Malu should just look at his talents and admire

his artistic creations. But she did not do that. He could not realise what a strange picture he made in her odd mind. But her conceitful looks trumpeted on his very heart her aversion towards him. Was it because he was a competitor for her in their profession or was it because of the manager of their drama company?

As he brooded over this, his fingers mechanically created the figure of their manager from the piece of the clay. Sethu had his own grievance against him : he had a feeling that this man was trying to purchase the affections of his lady love with his money and but for Sethu and his friends would not have had the money which he owns now.

* * *

Woman has always been a confounding problem of this universe, an unanswerable riddle to this world and a kind of mystifying secret eluding the wisdom of man. He has been trying in vain to understand the meanings of her odd behaviour and her emotional set up and she has been mystery to him all these days.

Sethu was more or less confronted with a similar problem when he saw Malu running towards him with an accosting smile as he was brooding lonely in a corner of the gardens in front of the drama theatre. He has never seen her accosting him with smile and he was wondering at the startling metamorphosis which she had undergone; she strode towards him and sat in front of him.

" Why didn't you come to the picnic last night ?" she asked him.

Sethu drooped down his head and with his great toe began digging the earth as he replied, " I didn't want to Malu"—his voice hoarse and choking with emotion and he hoped that Malu would question him more about his absence, but she did not.

There was a withered smile in her naive innocent face when Sethu looked up at her disappointed. In the pause that followed her thoughts seemed for away.

" Can you make one like that ?" She was pointing to the statue on the pedestal in the centre of the gardens. It was a huge figure of a Wench, the creation of vanished, hands that had known woman too well or else had been deprived of them entirely. The statue had been caressed with desire and fashioned with a hungry ruthlessness and there was something honest and direct in its lack of modesty.

" It is easy Malu ;......when do you want it ?"

" Before this Sunday ", she leaned back with her mouth open and started to laugh.

Sethu returned to his room that evening his mind full of fanatic desires to pour all his talents and create the wench for Malu. He remembered having made a similar one and kept in his house at Melur. But he wanted to do a fresh one a better one which could win him a soft corner in the heart of the pretty girl and fulfil his long cherished desires.

* * *

It was Sunday, The day was wet with rains and Sethu cursed the heavens in hundred names as he stood beside his masterpiece creation—the exact replica of the wench that stood on the pedestal in the gardens. It needed the final painting for completion ; but it was wet because of the rains and would take more than two days for it to dry up.

A sudden idea struck at his mind. Why not go home and bring the model which he had already made ? It too was quite good and if only he walked a bit fast it would not take more than two hours for him for the to and fro journey and he would be able to keep up his promise to Malu.

The wind whistled with rage, heavens crumbled in thunders and rains thudded on the earth with renewed force. Sethu

running along the curved white path to Melur piercing the rain madly as he ran. He battled his way through the small bushes and groves, the water streaming down his face and soaking his shirts.

Every where there were traces of recent floods, roots washed bare and places where swirling waters had heaped up their debris of sticks and mud stained leaves.

Sethu was mad with one and the only thought of getting back with the wench model and giving it to Malu in time. He imagined Malu praising him in thousand cheers and showering him with her affections. He dreamed about the strange friendship which would follow between them and become the gossip of the whole town and envy of his friends.

Thus pondering about the future he entered his hut feverishly—It was dark like a den and somebody was lying in a corner wrapped in torn clothes from head to foot ; but Sethu did not bother to see who it was—he ran straight to the place where he kept the wench model and groped in the darkness frantically. Some portion of the low lying roof of his little hut hit him on his head several times and it hurt him terribly. He became furious and shouted for his mother.

There was no response and the whole place seemed deserted. This added to his anger and he came out of the dark room cursing his mother,

" Mother ! where the hell did you go ?"

The wrapped up figure in the corner moved a bit and groaned. It was a pitious sound that came out in great distress.

Sethu dripping from head to foot walked towards that bundle again shouting in great fury, " Mother ! how many times have I to call you ?"

Now his mother shaking in weakness tried to get up and sit with an inviting smile on her face. She was skin and bone her hairs dischevelled, her lips thin, pale and parched with a deadly fever. Her eyes seemed to have lost their lustre and gone deep into the orbit. As she viewed her beloved son there, a gleam of brightness came over her features ; it was only momentary. It died shortly—" Sethu, my boy why did you come in rains ! go, wipe your head and change your clothes ", she groaned in a lone shaking voice.

But none of these fell into his ears. He cried again to her in his wrath, " Where is that wench model ma ?"

" Which model ?...all your models will be safe in the room !" go and change your clothes my boy. " Will be safe in the room !" Sethu shouted sarcastically. " It is always the case in this wretched house. You won't find a thing —where you kept it. "

" Which model you mean? why are you so angry my boy ?" the mother asked her son kindly. She was quite accustomed to this sort of behaviours of her son.

" I mean, the wench model ", Sethu shouted in reply.

" Oh that nude figure ! father sold it only yesterday in the city and brought me some medicines, Your wench had saved me out of crisis yesterday, " and she dissolved into a weak laughter as she told this.

" He sold mine and brought you medicines ? ah eternal philanthrophist. " Sethu did not know what he was talking. His mother plugged her ears with both her hands and moaned " you have lost all respect for elders. "

" Elders ", Sethu scorned frantically. He rushed back madly into the rains disappointed and disgusted and he could hear the wail and weary cry of his mother deploring for the mistake and requesting him to change the dress and eat something before he started. In her affection she tottered slowly in front of the hut and

cried as best as she could for her son. The pathetic figure of his loving mother and her affectionate cries waned away slowly and became distant and one with the rumbling shatters of the rain, as he was running away once again into it and as a new thought shaped in his mind. The thought of meeting Malu and telling her the whole story. He could even show the wet clay model which he had made for her.

It was late after noon before he reached the gardens in front of the drama theatre. There he stayed under a shelter for a while to wipe himself dry before he could meet Malu. From some distant corner he heard some sound. He walked up to the spot and as he saw Malu with the company manager there, he shirked around the dark of a bush and leaned against a tree, rain waters streaming down his face.

Malu was holding a wench model in her hands—the one which he had made once and the one which his father had sold yesterday in the city. Sethu took a few steps forward and pressed his face against the tree. He could not quiet the loud beatings of his heart. He leaned forward dully aching with an ache that existed beyond the realm of articulate thoughts and words.

" Malu ! I brought it only for you ! ; it cost me a lot. " Malu was locked tight in the arms of the manager, her mouth full on his. Something strong snapped in Sethu. Something shattered and crumbled in his chest. He never thought that it could be so easy.

He trudged back in the slashing rains, collected his few belongings and left the place never to return for ever.

Don't tell your friends about your indigestion ;
" How are you !" is a greeting, not a question.

* * *

A tourist was introduced at Albuquerque to an Indian with a reputedly perfect memory. Sceptical, the tourist asked, " What did you have for breakfast on October 4th, 1933 ?"

The Indian answered, " Eggs. "

The man scoffed, " Every man eats eggs, he is a fraud ".

Eight years later the traveller's train stopped again at Albuquerque and he saw the same Indian greeting him. The traveller said jovially, " How ".

The Indian answered, " scrambled "!

—*Readers digest.*

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Letter to the Fresher :

Food for Thought

PETER MARTIN REX,
4TH YEAR.

Dear friend,

Blossoming as a fresh flower in the Stanleyan Garden, you may find yourself placed in an entirely new atmosphere. A few months have passed since you entered this glorious institution and you may yet find yourself entangled here as a stranger. My aim in writing to you this letter is only to lend you a helping hand in adapting yourself to the Stanleyan environment so that you may be a Stanleyan both in name and in spirit.

You have found a place in a College which has a glorious past of which anyone can justly be proud of. This College has brought forth many an eminent physician and surgeon, who have added grandeur and lustre to the medical world today. The spirit of service on the part of our predecessors in this College, has given birth to the "Social Service League" of this institution and mind you, my dear friend, it was the first of its kind to be formed in the whole of Madras State. Mother Stanley has always evinced keen interest in the culture of the land and it is no exaggeration to say that it is Stanley which has given the lead to many of the professional colleges in the proper organisation of Cultural Festivities. So let it be your privilege to be proud of being a Stanley Student.

You might have been dinned into ears with the phrase, "Stanleyan Spirit". It is something supreme about which little is understood but much is spoken of. You may believe that it is "Stanleyan Spirit" for seniors to look down upon the juniors and for juniors to look up to each senior as and when he pleases to command. My dear friend, it is not so.

Stanleyan Spirit is something great. It is something which lies in the depths of a Stanley Student's heart which cannot be arrested in words. It is nothing but the true relationship which exists between the teacher and the taught which is an asset of this institution. It is the essence of our civilisation; an offspring of the gurukula system of education of this land. So my dear friend, try to inculcate this spirit.

Some of the teachers in these days have got a misconception regarding the

Renunciation of thinking is spiritual bankruptcy. But there are as many ways of thinking as there are men. And as ideals and concepts compare and contrast, the fittest survive.

" teacher-taught " relationship. They think that it is below their dignity to talk with students topics other than the subject. To discuss with students on their hobbies, mode of living, they think, will ruin their superiority. No wonder they are unpopular among the student population. Turning to our College teachers, it is not so. They are quite aware of the fact that " it is only by the way a great man treats little men that he shows his greatness ". By treating us students in the usual, kind, lovely way they show their greatness. Here in the Stanleyan soil, the teacher is a guru inside the classroom receiving every kind of respect. But outside the class, he is a friend, philosoper and guide, taking lively interest in our day to day problems.

In the words of Henry Newman, " a University consists and has ever consisted in the relation and bond which exists between the teacher and the taught. Its constituting animating principle is this moral attraction of one class of person towards another, which is prior in its nature, nay commonly in its history to any other tie whatever ; so that where this is wanting a University is only in name and has lost its true essence ". This applies to each and every institution, especially to a medical institution. Stanley has never been lacking in this animating principle of moral attraction between the teacher and the taught. Hence my dear friend, try to preserve this teacher-taught relationship. Do not forget the farewell words of Dr. C. Raghavachari : " What brought me nearer to you was the teacher-taught relationship and nothing else. " Certainly it was not the Deanship that endeared Dr. Raghavachari to us as was his Professorship.

Now, turning to the student community of this college, we are divided by various cultures and languages. So many diversities exist among us. It is only through a noble spirit of brotherhood that we keep the sweet concord of harmony amidst diversities.

Differences of opinion may prevail among us in various activities in the college. Of course it is the sign of a sane and progressive mind. Give weight to them, but in a common endeavour let not these divide us and make us static. " Let us consider one another to provoke unto love and to good works ; not forsaking the assembly of ourselves together ".

The profession which we have chosen is indeed a noble one. It has no boundary of Caste, Nationality or Creed. This we all know too well. But it does not mean that our outlook in life should be " cosmopolitan " in all its aspects. Some of our friends do not want us to have a language of our own, a culture of our own. I think you will not agree with this view. Hold in high esteem your mother tongue, the highest treasure possible in your life. A nation or a community which does not hold its treasures in high prestige and preserve them can never survive or thrive. Remember your mother tongue, your language. Whatever it may be " Language is a temple in which the soul of those who speak it is enshrined ". Preserve and decorate this temple. Let it be a bond of unity among us. It is " dirty politics " to speak of caste unity. It is language and language alone that can save this land from all such " petty matters ". When I say, ' love your mother tongue ', I also mean, ' hate not other languages '.

Do not consider languagc as a mere vehicle of thought. It is something more than that. According to Dr. M. Varadarasan it is the fundamental basis of culture. My dear friend, forget not the works of Vallothol, the sweet poems of Thakkanna and the inspiring patriotic songs of Bharathi. Language is the immediate gift of God and let not the literary works in your language be alien to you. Let study of literature be your sweet recreation.

In this context, I would like to put before you the valuable words of De Velara, the renowned leader of Ireland. He says, " If I were to leave the scene tomorrow and be asked what I would say

to my countrymen and what I would wish for my country, I will say, " Save your language if you want to save your Country ". My dear friend, it is only by loving your language you can save your language.

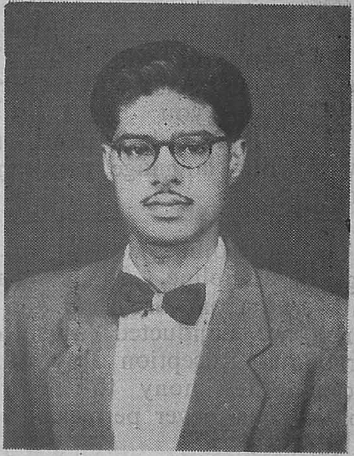
There is nothing wanting in Stanley as regards discipline. Stanley hardly needs any sermon on discipline and the way in which we conducted ourselves on the Graduates Reception Day this year is an excellent testimony to this statement. Politics has never permeated our college atmosphere and it ought not to. We form a community by ourselves. Let us try to be disciplined citizens of this worthy land. Let us have discipline emerging out of responsibility and not out of fear.

I have given you some " food for thought ". Whether it is palatable or not, I leave to your wisdom and judgment.

Yours sincerely,

'Anban.'

" And look ! I have mastered the trick of killing two deers in a single throw !", said Jaswanthy. But Altunia, the noble, least expected what more could a woman like Jaswanthy do.



THE PURPLE PASSION

BY

T. K. GURUMURTHY, *3rd year*

The night was flooded with moon-light and the city of Delhi like a disconsolate dog under the shimmering shine of the July moon, was sleeping on the banks of Jamuna. Delhi, the capital of Moslem Reign, 8 hundred years ago, was just a township with roads cris-crossing and studded with dilapidated shrines and developing mosques. Long columns of the minarets were, as it were, trying to kiss the sky. Vast areas of huts and hamlets were in ugly contrast to many a mansion housing the priveledged few—priveleged to plunder and pillage with impunity.

Dim and flickering lamps gave the mansions a grim splendour. Some of the mansions housed the Nobles of the court and some served as harems wherein the Nobles had recourse to their amourous pleasures. Debauchery of Hindu women and devastations of Hindu homes and shrines were the order of the day. Nobles gave vent to their valour in plundering the Hindu poor and abducting the Hindu women. Often their riches were counted in terms of the Hindu women they maintained in their harems. Towering them all was Altunia the Chief of the Forty Nobles in the court of Sultana Raziyya.

* * *

The roads of Delhi then were not safe for the commoners and some of the broadways were even prohibited and reserved entirely for the exceptional use of the Royal Household. In one such broadway under the bright moon was heard a hum—the familiar hum of the palanquin—bearers. The palenquin was borne by four heavily built slaves, their ebony figures casting hideous shadows gave a grimness that reflected the rigours of the times. The slaves were massively built with nothing but a strip of loin cloth giving them any clothing at all. With the palanquin on one of their shoulders and a spear in one of their hands, their even steps gave the general carriage of their burden a rythmic flow. The familiar drone of their hum tuned with the gentle music of the breeze. All around was serene, calm and cool ; but, all this calm did not give one soul any peace nor his mind any rest, And that was Altunia's.

Was he going anywhere to rest his turbutlent spirit ?

* * *

The weary plodding of the palanquin-bearers was coming to an end, the even swaying of the palanquin stopped, the long strides of the sable slaves shortened into small paces until they stopped with a shuffle in front of the magnificent portals of a mighty mansion, huge with palisades and rich with gorgeous art on the arches of the domes.

It was an expansive mansion squarely built, abounding with domes and canopies, set decoratively amidst a vast resplandent garden with cosy vegetation—art adding lustre to nature like a pearl in a pendant.

" Give way to the Noble ", shouted the palanquin-bearers, who stooped low in obedience and receded.

Altunia stepped out with all the grace of a lion after its prey. He ascended the smooth stones of the steps bridging the threshold and soon was at the face of the mighty doors, whose metal bands were glittering at the cool glare of the midnight moon. Altunia lifted the big, shining knockers and let it down thrice. Soon a lattice-framed window creaked and the inquiring features of a watchful eunuch showed up holding a bright lamp whose glow lighted Altunia's face which depicted harrowing reflections to discerning eyes. Even all the pomp and pageantry of his gem-set turban and the brocade embroidered with gold and silver could not conceal in his demeanour the faintest tinge of craftyness and cunning, in his face the slenderest suggestion of evil and intrigue, nor could it match the fire and ferocity in his eyes deep sunk below his shaggy brows.

" Oh ! Most worshipful Noble ! Pray tarry a moment, Sire ". voiced the lamp-bearer and no sooner his face disappeared into the dark interior than the barring doors flung open revealing a large hall which was immediately flooded with light from the overhanging glass-chandeliers.

The hall is tastefully decorated with paintings blending the Oriental splendour undermining the Moslem crudity. Those were the days when Hindu art and culture were struggling against the impact of Islamic Ideals. The floors were covered with the rich and gorgeous Persian carpets and on it Altunia stepped forward.

The tired but wary eyes of Altunia brightened hearing soft foot-steps and at the sight of Jaswanthy—whose walk was dance, whose talk was music, whose looks lustrous, hips swaying and face that art cannot improve nor nature complete. She was a Rajput, just touched her twenties and dressed in the fashion of the Rajput ladies—but without the Veil, for, after all, her face was meant for the langourous eyes of Altunia the Noble. Hers was a charm, rare, ravishing—a charm that at once was a mask of all passions—animal human and divine. It was only her delicate, bewitching beauty—the beauty of a sleeping tigress,—that spared her from rape and death and brought her under the patronising influence of Altunia the Noble. She was a bird unique and unrivalled in its grace and grandeur, but a bird behind a golden cage. The cage was Altunia's.

Jaswanthy muttered, " My Lord, you were long in coming !" and fell in his arms. Altunia with his diamond laden fingers lifted her lovely chin and his eyes glistened at the warm touch of her moist lips. The kiss had its depth but lacked the warmth ; it had its passion but lacked the fervour.

The sensitive Jaswanthy was quick to utter " My Lord, You do look worried".

Altunia looked at her for a moment and heaved a sigh. " Yes, my precious !" He steered her to the velvety lounge and Jaswanthy gave a glistening cup brimming with foaming wine, red as his desires and cold as his deeds. Altunia clenched his teeth and hissed " Sultana Raziyya ! Let her be damned."

Jaswanthy's eyes opened wide with horror and amazement and said " Lord ! What prevents you from sharing your troubles with me ? Of what, am I guilty to be removed from the honour of your confidence ?"

Altunia smiled wanly and drawing near her, rested his care-worn head on her rounded thighs and added, " The palace has proclaimed Sultana Raziyya's ascendency to the throne !"

Jaswanthy could not comprehend and reconcile the note of despondency in

Altunia's words with the jubilant succession of the Sultana Raziyya. "Pray, My lord ! It is quite a natural thing to do. It is not the late Sultan Iltutmish's wish that his daughter Raziyya should succeed him. Why ? It is right after all !"

Altunia clasped her hand in a violent grasp, " Right be damned ! I cannot kneel or bow down before a woman, never shall Altunia the Noble be a vassal to Raziyya even if she be the Sultana of Delhi. " He spat out, " A woman as Sultana !"

Obviously Altunia was piqued to the core that a woman should be his ruler, and that to a woman, he should be dutifully bound and that to a woman, he should answer and dare not disobey. His manly arrogance could not suffer a woman's reign.

Jaswanthy caressed his puckered brows and as if she had read his thoughts, she teased him, " Why it is so much of a concern to you, My Lord ! Could not a woman be as wise as you men think you are ?"

Altunia shook his head decisively, No ! A woman's rule is the worst form of tyranny ; it is the tyranny of the victim over the victor. I shall never let it be so".

" But, My Lord !!' She replied with a faint smile playing over her lips, "I have not missed the news that you are in favour of the Queen ", she added stroking his cheeks, " Maybe a Malik Naib —Chief Minister."

Altunia rose and said " Chief Ministership, under her its to be the first of her slaves ".

Jaswanthy took his face in her hands and lisped with all amour in her looks, " Pray, My Lord ! quit this. Let not the cool night nor the blue moon be wasted ".

And they certainly weren't.

* * *

The sun rose slowly spreading its warmth and glory with infallible regularity. The people of Delhi busied themselves once again on their daily routine, totally indifferent to the state crafts and strategic intrigues.

The court of Sultana Raziyya had assemled. Altunia, the chief of the Forty Nobles, was at the head. The Jagirs and the learned Mullahs occupied their respective seats. The Nobles who formed the inner circle of the Royalty had arrived in all their court splendour. The women-slaves in status but splendid in attire-scurried fleet-footed to attend to the needs of the Royalty.

The assembly stiffened suddenly as the controversial Sultana Raziyya marched to the throne flanked on both sides by an unending train of slaves. All the eyes were intent on the Sultana but their intentions were different. As she passed, all the nobles, great and small, knelt down and kissed the ground she trod. Her proud bearing was quite befitting her privileged position as the first Moslem Lady ever to preside over the destiny of Hindustan. She exhibited rare charm, stately and graceful. At the same time she was wont to be wilful, wayward and wanton in her ways and views. She had stout courage as to disregard all conventions and appeared in the court without the Purdah. She knew that her face was her fortune-and her forte too.

As she sat everybody echoed in unison " Long live the Sultana Raziyya' by the Grace of Allah, the Merciful and Compassionate ".

Sultana Raziyya acquiesed and spoke, " Loyal Lords of Royalty ! Be it known to yet that my prime aim in wielding power is to perpetuate the Consolidation of the Noble Moslem Rule in the soil of Hindustan ! Ye are all one with me that Islam is Supreme and that Islam shall always be on its onward march and none shall dare to obstruct our aim. But it so happens that

the Nabob of Bengal has foolishly chosen to rise against the Blessed Sultanate of Delhi. I order that he shall be silenced, his rebellion be subdued and his reign subjected to the authority of Delhi". She rose with a patronising gesture and eyeing Altunia with an apprising look, she pointed a finger at him and proclaimed that, " The Chief of the Nobles shall assist me in the task. I command that he shall muster our forces to subdue the arrant Nabob and hoist the banner of the Delhi Sultanate in Bengal. I issue that the Chief of the Forty Nobles start his campaign forthwith and wage a war in the name of Allah and Islam !".

The hall hushed into the grips of silence. The only sound heard was a grunt—the grunt from the Noble Altunia. As the court dispersed, Altunia was seething with anger and malice at the Sultana Raziyya's temerity in ordering him to march against the Nabob of Bengal. The way in which she singled him out, the look that she gave like that of a cat stalking at his prey all inflammed him with fury. Yet, hopeless as his position was he dare not lift a finger against her. He sulkily left the court instructing the Commandant of the Forces to march at dusk.

* * *

The sun in his unfaltering groove of Time, showing neither haste nor hesitancy, was bidding good bye and was setting slowly and with it also the sweltering heat of the July sun.

The young and recent Quitib-minar with its plasterings not yet completely dry, raised his proud head high and above the sky casting a long shadow, the shadow that carried to the very outskirts of Delhi. Quitib-minar built barely a few years ago by the late Sultan Iltutmish in memory of the saint Quitib-uddin was a stately monument for the saint and was at once a towering symbol of the fusion of two great civilizations of two great cultures—those of Islam and Hinduism. The Hindu pattern of life and their way of life had a great blow by the impact of Islamic Civilization consequent on the moslem invasion of Hindu India. Hindu artisans were compelled by force and torture to build this minaret to perpetuate the memory of a Moslem Saint. Art to them was no longer a labour of love. The depth of art depicted on the walls of this minaret was reflective of that of Man's insight into regions of thought far above mundane. The creative spirit of man is indeed limitless and this tall column of brick and sand was puny before the height to which human endeavour can reach ; yet Man with his animal in him seemed a poor midget before this minaret.

Quitib-minar was centered within a huge garden fringed all around with trees-tall, stately and green with life. Evenly pruned shrubs bounded the vast area, the lawns of green grass filling up with cool splendour. Chequered amidst this eye-filling spectacle was many a rest house serving as rendezvouz for sensuality and romance, but strictly for the Royalty. In front of the tallest, biggest and best of the houses, earmarked for the Head of the Kingdom a slave was on guard with his charecterestic indifference to the amourous activities within. Sultana Raziyya was reclaining on the couch and was looking at Yakut, the Abyssynian slave, fetching her drinks, the look being patronising, tender with that inexplicability that only love can account for. Yakut was strikingly handsome with a tall and a well-knit figure and had manly features which commanded inspiration and confidence. His small eyes had rare penetrating power that gave an inkling into virile vitality velled within his quiet exterior. His movements were slow but sharp, which gave him poise though not grace.

It was not easy to discern the degree of interest Sultana Raziyya had for this Abbyssynian slave, but it was common knowledge that Yakut had the favour of the Sultana with a distinct quality, the like

of which was not bestowed on any one else, and the why and how of it very inscrutable to all !

Sultana Raziyya followed his movements as he came to her and handing over the bright and brimming cup, said, " Your wine, my lady !

Her lips parted in a seductive smile, and took the wine cup and with a husky voice she said, " Yakut ! come near me !". And he without a flicker of expression, bent towards her, resting his hands on the couch.

" Your Highness !" boomed a voice from behind. Yakut turned with a jerk, and stood aside. Raziyya turned placidly with all majesty. She was every inch a queen and was least ruffled at the unwelcome intrusion. She was surprised at Altunia's presence, but did not as much as wince.

" Yes !" she replied.

" I have come to take your highnesses's leave. I am setting forth on the errand ordained by your Majesty ".

Raziyya scanned him haughtily. " I hope everything is well planned, Noble Altunia. By the grace of Allah let success attend you !".

" I pray my deeds justify your trust, Your Majesty !" said Altunia dryly and was gone.

* * *

Hours passed into days and days into weeks. The messengers from the battle front brought tidings that were'nt encouraging. Altunia sent an appeal to the Queen to despatch another force led by Yakut. Raziyya wondered, but the interests of her kingdom loomed larged. Yakut went with a cavalry. There was a strange pain in Raziyya's bosom.

Yakut went but never returned. Altunia returned victorious and jubilant, his mission fulfilled ; his errand completed ; his plans—more than one—successful !"

Jaswanthy was playing, throwing daggers at targets in her garden. Deers were running amuck, some wild with fright and some rooted to the ground, paralysed with fear. She picked dagger after dagger from the hand of the attendant slaves and shot at the deers, never missing her mark. She repeated the same with her eyes even blindfolded. The carcasses of the bleeding deers imploring with eyes half-closed and half-dead to spare them from the agony of this cruel sport was of no import of Jaswanthy, whose eyes were intent on her mark, sparkling with intoxicating violence and devilish delight. And as the climax, she with infallible dexterity aimed at a pair of deers and struck them with one blow.

" Jaswanthy !" floated a familiar voice from the portals. She at once threw away her daggers and into the arms of Altunia, crying with delight, " My Lord ! How happy I am that you have come ! And look ! I have mastered the trick of killing two deers in a single throw !"

Altunia smoothed her hair and said smiling, " Wonderful, My Love ; I too have killed two birds with one shot !"

" How !" said Jaswanthy, her eyes narrowing.

" Yakut is no more !" said Altunia with a strange calm.

Jaswanthy, taken aback, said slowly, " Yakut is no more, My Lord ? Was he martyred or murdered ?"

Altunia turned into the house and laughed haughtily. " Murdered, " he replied with his eyes dark with flame. " Sultana Raziyya thought I am a silly ass. But, after all, an Abyssinian slave shall not deny the privilege to Altunia, the Noble, his due !"

Janwanthy winced. She read the looks and thoughts of her Lord. She unterstood

that Altunia was plotting for the favours, (failing which, for the fall) of Sultana Raziyya and to achieve that he had rid of Yakut in the battle field by slaying him. Dark clouds of suspicion and uncertainty crossed her mind. She pulled Altunia's sleeves and asked with trumbling lips, " Where will this lead us to, My Lord !" the voice accusing.

Altunia laughed and laughed and with his feet apart and his arms folded, he challenged, " It will lead your Noble Lord to the priceless place of the Prince Consort of Sultana Raziyya. "

Jaswanthy's eyes were inflammed with anger and jealousy. " You swine " she blurted and roared, " You shall neither desert me nor marry the Queen ".

Altunia countered, " What a vain woman you are ! Did you fancy for a moment that my love for you will endure through all eternity ? Love, my dear, is a short-lived passion !"

Jaswanthy's eyes gleamed to kill. " Yes ! a vain woman indeed ! Vain in believing your fraudulant flattery !"

Altuuia teased her, " Be sensible, My little bird ! You are still young ! Young enough to excite the passions of any man. Take my advice ! I will give money. Run away ! Why ! Abdul, the Brother Noble is intent on you ! You will doubtless occupy the highest position in his harem !"

She beat him on his chest with both her fists. " Not a word more ! Fancy a woman loving again ! Let me tell you, a woman loves but only once ! But you base and vile men......"

" Never love, My dear ! Love to you, women, is a passion ; to us a mood : To you it is a religion ; to us merely a ritual. A sacrament unto you and a Science to us ! No bee ever sticks to one flower ! Neither shall I ! I prefer at the moment the Slave Queen of Hindustan !" said Altunia with arrogant success registered thick on his face.

" Begone, you beast, instantly ! You shall never step into this house again ! What magnanimity ! What promises ! I shall not accept any gift or money ! Understand this, that the day you wed the Queen shall be the day you lost live ! The hands that soothingly caressed me, the lips that tasted mine, the mouth that poured out empty promises, shall not repeat the same unto Sultana Razzyyia ! Remember ! I am a Rajput and a Rajput never fails a word ! Begone, you beast ! Jaswanthy poured out all her contemptuous venom, her eyes swollen, her breasts heaving.

Altunia smiled smirkly. " Oh ! My dear ! Do not mar your beautiful face by such cruel emotions as anger and jealousy and thus rob your own treasure !"

And he was gone.

* * *

The wheel of time rolled on but it did not help Altunia to make any headway into Sultana Raziyya's heart. He knew soft methods will not yield any results and women would have to be won the hard way and Altunia was a past master of that art. He restorted to violence and intrigue. Along with the other Nobles he caused great worry to the Queen and her subjects. He intensified his campaign of rape and rapine. In the name of Islam he perpetrated pillage and plunder on many a Hindu home and shrine.

A clever and just Queen that she was, Raziyya smelt the trouble and decided to tie down Altunia and his hirelings and she sought to do it in her own inimitable ingenious way:

Sultana Raziyya of Delhi married Altunia, the Chief of the Forty Turkish Nobles.

On a warm evening of August, the placid waters of Jamuna flowed past. The rolling wavelets of the river rippled into a celestial music. The surface imbibed the sheen of the golden hue from the setting Sun.

The Royal Gardens were on the banks of the Jamuna. Sultana Raziyya strolled amongst the rose beds whence she observed Altunia lost in a contemplative mood. She approached him and touching him, gave a lascivious look, " Well ! My Consort ! I hope you are at peace with the world !"

Altunia rubbed his palms. " I am, Dear ! I have had what I wanted. Success always lays me cold !"

" Success ?" queried the Queen quizzically, "at what ?"

" Well, Raziyya ! You were a challenge to my spirit of conquest and I set out to conquer you and I have done it ! But you I shall propagate and perpetuate the ideals of the Universal Brotherhood of Islam in Hindusthan ! Glory unto Allah !" His eyes twinkled. " Do not be disappointed when I say, Love never brought me to you, Razziyya ! I repeat, a woman is merely an object of challenge to me and you were one !" He smiled with triumphant arrogance.

But soon he was perplexed when Sultana Raziyya clapped her hands and convulsed with laughter. " Neither you be put out. My Consort !" she sarcastically said, " when I say that I never loved you. But, I confess, I loved once but could not marry ! I am married now, but cannot love ! Yet, I do love most of all—the interest of my kingdom, the honour of my dynasty and the security of my subjects. And through you, with your alliance, I am ensured of these interests of mine !"

Altunia was disarmed. His arrogance paled in front of this rejoinder : He snapped, " Indeed ! Raziyya ! Love is sport, marriage—business ! Without any love on either side we make an ideal pair to marry and live !"

Suddenly, out of nowhere, a voice surcharged with emotion of anger shouted, " No !" and a dagger struck on the ground between the Sultana and her Consort. Altunia at once recognised the familiar voice and with dread and dismay he turned around. It was Jaswanthy. Her face dark and distorted with revenge. " Altunia ! You may marry but not live !"

Altunia set about to summon his slaves when Jaswanthy raised her dagger and stopped him.

" Jaswanthy ! This is a treason," pleaded Altunia.

" Yes ! Treason for treachery, " snapped Jaswanthy. "Remember, I told you a Rajuput never fails a word !" In a split-second she had whipped her dagger and slain Altunia, the Noble and Razziyya the Sultana of Delhi with one deft throw.

The murderous sheen in her eyes gradually wore out. Jaswanthy jerked and swayed and hot tears rolled down. She laughed hysterically. She moved near the dying Noble and stroked his head. For the last time he looked at her and muttered, Women like you are scheming, and you fail ! That is your tragedy ! Women like Raziyya act wise ! That is their tragedy ! We men think we are clever and that is our tragedy !"

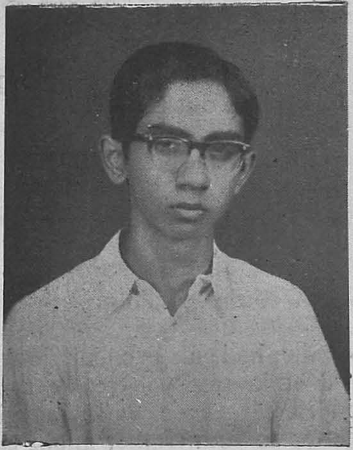
And they were !

Jaswanthy turned from the waste she had caused having heavily. A minute later all that was left to point to her was a splash and a few ripples in the calm face of Jamuna.

Jamuna was always calm, cool and serene. The waste and the hideous tragedy on her banks left her unruffled.

She was not interested !

In love, women try their luck; men risk theirs. But shrewd Nuts took out an accident insurance.



GUYS AND....

BY

S. G. SUBBUSWAMY,
1ST YEAR.

The one person one doesn't expect to see in the India Coffee house is the devil. But just a week ago I had an experience there, which could only have been provided by that gentleman.

I was certainly dressed to kill that day. That suit......Beau Brummell had nothing on it! And that buttonhole! And those shoes! Wasn't it Hugo who said one can go anywhere, if only one had a beautiful pair of shoes? Why, with those shoes on, I could have broken all the ten commandments a dozen times over, and walked into Heaven, and no questions asked.

Ever noticed one thing? Think of Heaven, and just as you are beginning to hear the angels singing......you suddenly hear the shrieks of the damned, and there, in all its glory, is hell! You don't follow me? Now, try to remember the last highly boosted film you saw. Probably you entered the theatre with a supernormal heartbeat and burned with impatience during the newsreel and what not. And the chances are, the heroine of the picture had a cleft palate and you could smell the peroxide. And as for the hero, you would probably be delighted to see the colour of his innards.

That is what I mean.

And that is what happened to me.

"Hello, Nuts" A feminine voice, followed by a giggle.

I turned; and the world ended.

At least, that is what I felt.

Strange, you say? Of course, I like to hear feminine voices. But in this case, it happened to be the one feminine voice I had hoped not to hear.

When one is expecting a girl named Malathy, it is disconcerting to be addressed by another girl, named Leela. Especially if said Leela was one's last flame, whose position has recently been taken over by said Malathy.

"Any engagement?" she asked.

I made a noise, which probably the man from Mars might have understood.

"Good, You can take me to a picture."

"But I'm engaged", I wailed.

"Now, now, good boys don't lie".

I recovered, "When I say I'm engaged, I mean I am engaged".

Cold and dignified, that was me.

"May I know the details?"

"Are you writing my biography?"

"Ah, ha", she mocked. "Don't get hot. A girl, eh?"

She had known it all along, but she had to bring it out that way.

I made another noise.

" Now, Don Juan, you are taking me to a picture ".

Of course, I said no.

She had a peculiar look in her eyes. " You know, you really shouldn't be so indiscreet even with your girl friends. A letter to your father might embarrass you. Get it ?"

There it was. The good old blackmail. Who was the fool who said, let the dead past bury the dead ? What if the past refuses to acknowledge its well deserved demise and stabs you in the back, just to prove it is alive and kicking ?

I gulped. I looked at my shoes. The sight somehow cheered me up, and I managed a smile, meant to ingratiate.

And then I became aware of an interested spectator, who now butted in.

" Well ", snorted Malathy , "I thought you are taking me to the picture ".

I wished the earth would open and swallow me up.

The cat fight started.

For some time I was an interested, if somewhat pained, one-man audience. It was a lesson on the use of the language.

But soon the language became unfit for decent street walkers.

I tried to protest.

" Ladies, ladies ", I said.

" Shut up ". Unanimous. Twin souls so far as that was concerned.

I tried again.

" Getting late, " I exclaimed brightly, after a short consultation with my watch.

No response.

I began to wonder what I had seen in either of them. I have always gone in for bright eyes, but now two pairs were boring through me like oxy-acetylene torches.—very uncomfortable.

The exchange of compliments was still going strong,—fifteen minutes later.

I felt hot. According to programme, I should have been sitting by now in an air conditioned theatre, whispering soft nothings into a pretty ear. And here I was, listening to a pair of lovelies flinging out words, the bos'un of a tramp steamer would have hesitated to use.

I murmured.

" Oh , Woman, in our hours of ease, uncertain, coy and hard to please ".

" What !"

They stopped and glared at me ? The sort of look, the statue might have afforded ol' man Don Juan. Stony, if you see what I mean.

I repeated what I had said.

" Uncertain ! Why, you symbol of constancy ", hissed Malathy. " Who do you think you are ?"

" Coy !" exclaimed Leela. She seemed about to scream.

" Hard to please ! Why, you... ...' Malathy was on the brink of apoplexy.

" Come, Malathy ", said Leela. " We can look after that insect later. Let us go to the picture ".

They moved off.

Suddenly Leela turned.

" Think you are rid of us, eh ? So you are. I wonder what your father will do to you when he gets my letter ".

Exeunt the beauties leaving the very unbeautiful me in a quaking world. I certainly felt sick.

But I am not the man to give up without a fight.

The next day, I met Leela accidentally on purpose.

"Why, I never expected to see you here ".

She knew me too well.

" Nuts ", she said.

I was hurt . "Look here ", I started.

" Nuts ", she repeated. " I know what you have been chasing me for. Go ahead, cringe ".

I cringed.

For some time, the conversation was on general topics. Such as Zoology.

Then after having determined my exact position in the animal kingdom, she proceeded to the matter on hand.

" You will probably be delighted to take me to a picture tomorrow ", she said.

I said, I certainly would be delighted. Would she have the kindness ....?

" Fine, I think we are going to get on very well with each other. "

I had other ideas. but I nodded my head vigorously.

We fixed up the time angle and I left, after having been warned that if I was seen smiling to another girl, I would wish I were dead or that I had never been born or some such thing

The truce between the girls was over.

However that may have been, all was sunshine for some time. Birds singing in trees, myself singing in the bathroom and all that sort of rot. Peace has descended over my world.

The moment I set my foot on the road my peace of mind did a vanishing trick.

" Hello ! Nuts ", A feminine voice. I knew whose it was.

" What a pleasant surprise, Malathy !" I said. "Excuse me, I am late for an engagement ".

At least that was that I wanted to say. What I actually brought out sounded like the call of a dying swan.

" You owe me a picture ".

I repeated the dying swan act.

" You can take me to one tomorrow ".

I jumped a couple of feet. " Sorry Lady, I have an engagement tomorrow ".

I didn't like the look she gave me.

" Leela was going to write a letter to your father ", she said.

" Sorry to disappoint you, but she has changed her mind ".

" Too bad. she shouldn't have told me what she was going to write. You may phone me at about six, and make the arrangement ".

And before my heart resumed beating she was off with a cherry admonition that if I started running around with anybody, she would personally boil me in oil, with all the trimmings.

I collected my scattered wits and proceeded to analyse the situation.

It came out this way :

(a) If I took Leela along, Malathy would write to head quarters.

(b) If I took Malathy alone, Leela would write to H.Q.

(c) The chances were, something would go wrong, and both would write to H.Q.

There were three things I could do.

(a) Kill myself or run away.

(b) Murder Leela, or Malathy, or preferably, both.

(c) Commit patricide.

The fair sex ! Good lord !

I was beginning to ponder over the relative merits of hanging and poisoning when my guardian angel set to work.

That was what I thought, anyway.

I bumped into Krishnan.

You know Krishnan, of course. Boxing champion. The chap who looks like Marlon Brando and Tony Curtis put together. Every photographer in town has a red carpet ready for him.

The type no girl can resist.

That was what I was banking on.

Catch my idea ?

If I could get him to entice away one of the girls, I was saved.

Krishnan needed no persuasion at all.

When, a little later, I phoned up Malathy, she was sorry, but her uncle was arriving in Madras the next day, and .....in short, the old run around.

So God was in his Heaven and all was right with the world when I set out the next evening to entertain the female Al Capone.

Sartorially speaking I was perfect. Nothing to raise up one's spirits like really good clothes.

I didn't even protest when the ex-lady love turned up in a sari which, she knew, I detested.

I felt no apprehension at all. After all, I thought, there was little fate could have in store for me. I was proud of myself. Fate had tried its best; still I was floating. A little precariously, perhaps, but with my head definitely above the surface.

With her first sentence, Leela pushed my head into the water and held it down firmly.

Let us see " Funny Face ", she said I was horrified. Not that I minded seeing " Funny Face ", or that I minded not seeing " Richard III " (which we had planned to see).

But I knew that Krishnan had planned to take Malathy there. Macbeth's experience with Banquo's ghost, you know only worse. The ghost didn't lay hands on Macbeth. Malathy and Leela, on the other hand, had theirs on my throat. One false move, and I would go bye-bye.

I pleaded. And I pleaded. And I pleaded.

Leela was obstinate. We were going to see ' Funny Face ', she said, "or else... ..!" She asked me why I was so reluctant to go there.

Wild horses couldn't have torn the answer to that out of me.

So it was to 'Funny Face ', that we went. I was jumpy, ready to duck at the slightest alarm.

Miraculously, nothing happened. We sat there, yawned during the newsreel, chatted throughout the interval. I bought her a drink. I wished I had the nerve, to put a pinch of cyanide into it.

When the picture started, I forgot everything. I lost myself in the charms of Audrey Hepburn. It was nice to be able to relax.

Therefore it is not surprising that I almost ran into Krishnan, when we came out.

At first, Malathy didn't notice Leela. She was embarrassed and started to say something.

The two girls saw each other simultaneously. Sparks flew in their look.

Luckily they had the sense not to create a scene.

The moment we got off the bus, it started.

The words the two girls used to describe each other, and me! They were hitting each other as hard as they could. I acted as shock-absorber.

Fate had won.

I had nothing to lose now. I said something I had wished to say for a long time.

" Go to hell, both of you. You stink. "

Only, the words I used were far less polite. I used certain adjectives a gentleman doesn't use in the presence of ladies, but at the moment I was not a gentleman ; and, as far them, they neither were, nor are, nor ever will be ladies.

But Krishnan didn't see it that way. He twisted my wrist.

" What did you say ?" he hissed, the gallant idiot.

I repeated what I had said in even more picturesque language.

He saw red. " You better keep out of my way. Next time I see you up to anything, I will use you as a punching bag."

" It is people like you that make the world what it is ", said Leela.

Malathy murmured something. I caught the words ' boiling and oil'.

I saw it was no time to stand on ceremony. In short, I fled.

I felt sick. I still feel sick. And I have an idea, the near future will find me sicker still.

Look at it this way. Any moment Krishnan might feel an urge to come here and tear my liver out. My father will act as his second and take over when he gets tired.

Malathy is probably out, buying oil to boil me in.

And Leela......I don't like to think of what she will do to me if she gets her hands on me.

Desperate situation, eh ?

There was just one thing I could do and I have done it.

I have taken out an accident insurance.

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I said I did not know

You asked me once, darling
Why I loved you—
I said, I did not know.

Now, across ages of separation
The voice of a haunting memory cries—
Remember, the face—
And your image mirr'd
In the mountain pools of her eyes ?

Remember the moments—
And the light in her eyes
And the movement of her lips
As you sat in the long shadow of a boat
And the distant strains of music
Came in the soft evening wind ?

Remember the touch
Of hand in hand
As you lay in the grass
And listened to the hushed winds in the Casuarina trees
And the sun's gold played hide and seek
On the ripening corn ?

Remember,
Remember—
The touch,
The feel,
The smile,
The sorrow,
And the joy ?

Remember, the last—the very last
Look, and the farewell,
And the pain,—
And the tongueless loneliness
Welling up in you ?

You asked me once, darling
Why I loved you—
I, like a fool,
Said, I did not know.

TALKING OPH THIS AND THAT

BY

A CHRONIC SINUSITIST

.... The hilarious end - result when a language constipationist gets a superadded cold.................

Gendlemen and gendlewomen;

Just when I am reviewing the activities of the students of this College, in this term, a bloody cold has again got my nose right and proper. So, I beg of you to excuse me for my language which must be extremely exasperating indeed.

The seajun began as in everytime with the gentz and ladeej blowing the election trumpets (ejjuse me here phor blowing my own noje). There waj heavy battles for the general secretaryship and various other ships oph the college navy (I, mean the college ajjojiashun ophcoss). It was all dejided by half neck lengths, jusht like the other day ad the rajes when the maharajah's hoss " cojander " won—I did not gain much that day, becauje my hoss was urgently called away to the Bathroom in the middle oph the raje and went away accordingly, " What much time the studens spending in their election compain" saje one probejjar. Saji he, " such much iph they spend in their studeej, they most shurely come firsht in the univercity! abjolutely.

Now the elections all are over, the wigtors are all over-rejoicing and the losers are simbly called spordsmen and are aljo invited to co-oberate in ajjojiashun. But what eczactly do they do in the ajjojiashun? This is surtainly a quesjun that boomerangs everybody, even the Hon. prejident. Daily evenings they conglude meetings and more meetings and what exactly they conglude in these meetings God alone knows.

By now the ards Secshun gets bijy. Newer and still newer girls are teamed up with older boyz. They say that they are sweading phor the sake oph the new Graduates, but secretly between you and me I can say that they are sweading phor their own sake.

Now comez the day, that the ards people have been swedding phor and that is the graduates rejeption. Boyz and girlz are dressed simply enjantingly and are overgay till they siddown to the tea party. Thize ize the firsht shock oph the day—not even the ujual icecream ije there to gool the irridated stummuk mucouj membrane.

Then the boyz and girlz go to the abjolutely decorated anatomy theatre and siddown and swead. Thize time the boyz are behaving abjolutely maharvellous. They do not hood even the prejedent'z speech, leabalone the bigshot'z. Now the Bigshot makes hije address and then the Dean as ujual declares a holiday. Then the endertainement stards with the ujual amalgam appearing firsht. Then when some one is really blowing the mouthorgan hot, the whole lighting sysdem suddenly dis-co-operades. Every body is now highly apprehensive lest something untowardy should happen. The Dean is under great dension. The ards secretary promises Lord Vinayaga that he will break four mangoej. And so on.

But the Stanley boyz and girlz are behaving like gendlemen and gendlewomen (jusht like I addressed them at firsht).

They are keeping calm and sedate adjeiph they were sleebing in a lecture class. Some studentz are trying to set up small bonafires and thuje set fire to the building, but are completely unsuxesful. And even in the darknej the Stanley ardists display their profound ard. One chap shouts ad the topmojt oph his voice and some people lijjen; another set oph peoble perform roek ' N ' roll dancing (danzing) on the stage and the audienz are simply enthralled at the Stanley studentz co-oberation.

So on, it goes when suddently the lights strike again and everybody is greatly reliefed. The funshun ends much much suxesfully and the ards sec. goes to the temple to break the mangoej, but suddenly remembers that mangoeh are difficult to break and so changes it to coconuts.

Everybody returns home habbie. The Dean izh habby; the guezts are habby; the probejjers are habby; the studentz are habby; the ardsec is habby and so is the Vinayaka, who likes coconuds more than mangoej.

Then when the studentz are recobering phrum the after effects oph the college day, comez the newz that the very beloved Dean ije going away to some coconut place. Studentz are simbly thunderstruck. Zum peoble said that the Dean was older than the Stanley idself and so how could he go away? others said that without the Dean the Stanley would be a vacuum, jusht like the insides of some peoble's skulls. Still others argued that how could ardspeople ard, spordspeoble spord, and other peoble do other things without the valuable advize and guidanjs oph the dean? Anyhow all oph them reconciled and began arranging such much parties and dinners to the Dean that id was said that the Dean went and *consulted with his Tailor.* Anyway the speech that the Dean made on the pharewell day simbly took the pathos away phrum me.

What now? The examinashun going studentz have begun to bother about their studies and their attendunce; and in the hostel, more reading means more smogging and even the innojent peoble have learnt to blow out rings (ejjuse me again phor blowing my own stuck up noje, a bit).

Now I am shure you are beginning to wonder, " what this chap is really having is a bad constipation whereas he goes about saying that he has only a bad cold " and strongly advije me to take a good doje oph the croton oil. But ouch' no. My pharmacology probejjar has specifically inhibited me phrum taking croton oil. He saje that ije an *irrident purgative and therephore* will irridate my insides—shurely nobody wants to be irridated whether outside or inside. My probejjier further saje, " My boy if you want to purge, by all means do: but never aje my student take croton oil phor it. Take a good doje oph magsulf is what I advije ".

And about my code I go to the E.N.T. Depardment oph the hosbital and what do they say there? They say that my code at all but simbly a case of chronic sinusitis. *And they advize me to get my noje* punctured or jusht be punctured in the noje. But Ouch', I am a much afraid man and I simbly run away phrum that place—though I can tell you that I am no coward; I have killed as many as 2432 cockroaehes and that too stinking ones.

Food Node :—Sumbody aphter reading this artical (how patiently!) thinks that the shtyle oph this artical waje phemiliar to him. Well! all I can say ije that the other chab who writes like thije ije not abjolutely copyright—at any rate not in my timbuctoo language?

Woes of a First M.B. Student

BY

" GEEYEM "

On their bellies, on their bums
Fresh from ' Cheries ' and from slums,
Thus on marble tables lie
Corpses that unclaimed did die.

Pull away the rubber sheet,
What a sight your eyes do meet !
Discontent, maybe, of what they did,
Seek to serve even as dead.

Touch the body, get the feel,
Press the palm and poke the heel ;
Get the texture of the skin,
Say a prayer and then begin.

Grip your forceps, set your teeth,
Through odious odours you must breathe.
Sharpen up the bright scalpel
Open up the Manual.

Now, my friends you are all set,
Now you must the skin reflect ;
Begin the work from sole or palm,
Faithfully follow Cunningham.

Remember now, no buttonhole ;
A perfect skinflap is your goal.
Instructions no one can grasp,
Relations that make you gasp.

Trace the trunk and every twig,
Bend over and dig and dig ;
Is this nerve ? is this vein ?
Must I bloody well search again ?

Look for arteries rarely red—
Because they never get red lead.
Bursal sacs that never exist
Vestigial organs that still persist,

Fat and fascia and fallopian tubes
Triangles, quadrangles, pyramids and cubes ;
All these things you must explore
By finding some you must find more.

Clean this ligament, cut that bone
Though you find it hard as stone ;
Saw this, scrape that, pull these out,
The manual yields no place for doubt.

Who can tell how eversion
Differs from damn inversion ?
Tell me what a sesamoid is,
What muscles go to make a kiss ?

Origin and insertion,
What the hell is pronation ?
Which is called the popliteus ?
Where to find the gluteus ?

Could you call a tubercle
Just a bony carbuncle ?
Why a little space contains
Fluids leaving filthy stains ?

Who would dream the mouth they kiss
Could lose its romance as ‘ Oris ’?
And the hand you love to hold
As a ‘ Manus ’ will turn cold.

Add to this a stringent staff,
Nay, my friends please do not laugh.
Disciplinarian professors
And those lousy lecturers,

Begging, cringing attenders
And those damn demonstrators,
Are to us a constant strain.
Drive us mad who once were sane.

Stories of his College days,
How he once by-hearted Gray's,
How he missed his Rama Rao
Of course he can't remember now.

But when a boy his doubts must clear
Has he got his manual here ?
Well, this is this, and that is that ;
Doubts are cleared—10 seconds flat

Of other things I can complain,
But your patience I may strain
Nothing shall I leave unsaid
About this chamber of the dead.

Why be forced to wear a coat ?
Why send home a damn report ?
Why not supply soap to wash ?
As for towels—Oh my gosh !

Late - comers who get no mercy
Then resort to skilfull proxy.
And why does water stop just when
We have stopped our dissection ?

And the hall in which we toil
Is filled with dust and dirt and oil ;
Corpses may be satisfied
But corpse I am not, until I've died.

Conditions must fast improve
Or a hell it is going to prove ;
Let us get out quick my friends
Thus you see my poem ends !

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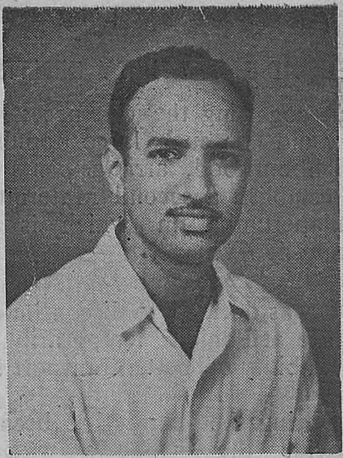
P. B. No. 196

Rural Medical and Social Service League (Regd.)

Annual Report 1956–57.

Secretary :
G. CHOWDAPPA,

Asst. Secretaries :
M. S. RAMADOSS & M. FAZLULLA KHAN.



Looking back to the activities of the previous year it is with great pleasure and to the utmost satisfaction that I wish to write a few lines about the salient features of the activity of our league during the year.

Account of weekly trips to the medical Relief Centres needs no elaboration. They are too well known. The weekly attendance of 400 patients at each centre and the yearly expenditure (about Rs. 20,000) are both increasing steadily.

As usual the 4th Medical Exhibition was conducted for raising funds for the League and it was a tremendous success (acclaimed to be our best exhibition ever to be conductcd) with a profit of a few thousands of rupees and on behalf of the exhibition committee I thank all those who have contributed to its success.

During the period it was left that more emphasis should be laid on preventive measures in the areas which come under our purview, and schemes were drawn up with the help and cooperation of the public health authorities.

Hea'th propaganda :—The health visitors with the help of the Local Health Inspector made house-to-house visits. Instructions on the maintenance of cleanliness of the environs and methods of prevention of cholera and small pox were given and benefits of prophylaxis measures were demonstrated. Advice regarding health matters was given.

Mother's care club at Alamadi :—Under the auspices of this Club lectures were conducted by the health visitors once in a fortnight. Lectures on antinatal and post natal care and benefits of the family planning were given. Advice on child growth and their education was given.

Anti scabies campaign :—Every week, children of all ages suffering from scabies were assembled and given a good bath, and the method of application of Benzyl Benzoate over thc body was demonstrated in all the three neighbouring villages. Combs and Coconut oil were supplied to poor children. The parents were taught the ways of prevention of the scabies. In order to follow-up the maternity and child welfare work, a maternity centre was provisionally established at Alamadi with four beds in local building lent by one of the villagers. Under the local developmnet schemes it is proposed to build a Maternity House with modern amenities to serve the area where there is no maternity aid available.

OPENING OF 3RD CENTRE AT GRANT LION :

As the number of patients attending the Alamadi centre had grown so large, it was felt, a third centre should be established, to divide and stem up efficiency of work and facilitate more individual attention and effective treatment. In this connection the Local people of Grant lion village deserve compliments for their cooperation in all spheres of our activities,

SECOND MATERNITY CENTRE:

Recognising the dire necessity of Maternity aid to such large population in the neighbourhood, arrangements were made to establish a second Maternity centre at Vadaperumbakam which is adjacent to Grant lion Village.

It was decided to discontinue the second centre at Panjetti temporarily pending the availability of better transport facilities.

During the year it has been decided to provide the villagers with minimum required amenties under the L.D. Works of the State Govt., and necessary action was taken for the following .

1, Protected water supply to villages with over head tanks.

2. Providing two wells in two villages.

3. Sanitary arrangements.

   (a) To form Village Health Committees,

   (b) To provide ½ mile drainage in one of the Villages,

   (c) to construct latrines and urinals in all the three villages.

4. Housing schemes for *harijans* were introduced.

An elementary School was a long felt need for the old Alamadi group of villages and it was arranged to run a school in the dispensary Building maintained by the District Board, Chingleput.

One of the main features of the activities of the year was the success of the annual camp. The camp was attended by a large number of students than ever before and most significant was the participation of woman students and woman welfare workers. It was acclaimed by all the distinguished visitors as one of the best organised where both the voluntary as well as Govt. organisation could coordinate in the Welfare Work yielding maximum results.

With all its expanding activities of our League it has been our earnest hope and fervent desire to convert Alamadi into an ideal Welfare Centre and a modern village.

In conclusion I wish to place on record our deep sense of gratitude to all members of the staff of the College and hospital for their unstinted cooperation and guidance. No amount of words can describe the debt the League owes for the guidance and continued encouragement to our Deans, Dr. C. Ragavachari, M.S., M.R.C.S., and Dr. R. G. Krishnan. F.R.C.S.

I wish to thank all the doctors and nurses who have been regularly attending our centres. Our gratitude is also due to all the firms and companies who have been liberally contributing donation to our League. I wish my successor every luck and god speed in his endeavours.

(Sd.) G. Chowdappa,
Secretary.

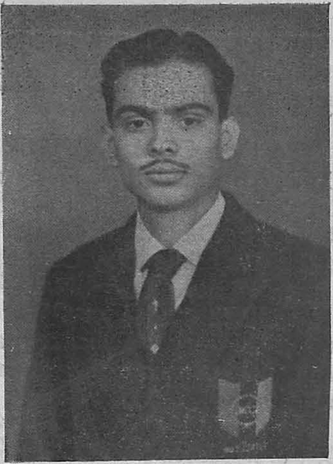
Examiner : What are Tardieu's spots ?

Student : I too don't know Sir !

ANNUAL REPORT

6th MADRAS MEDICAL COY. NCC.

Under Officer C. RAMADAS KAMATH.



I have great pleasure in presenting to you a brief report of the activities of this Company on behalf of the cadets of this College for the year 1956—57.

Training parades for the year began in July '56. On the 15th of August, we took part in tbe " Independence Day Ceremonial Parade " held at Island Grounds, Rashtrapathi Rajendra Prasad receiving the salute. Later such parades were held during the flag hoisting ceremony in both Stanley and Madras Medical Colleges, the respective Deans receiving the salute. There were no weekly parades for the examination-going students in November.

During first week of December we took part in the Annual NCC Day Celebrations conducted by HQ. No. 2 circle NCC.

As our cadets were eagerly expecting, the Annual Training camp of this company was held at Ram Tekri near Army Medical Corps (South) Poona. After half an hour of vigorous physical training early morning to warm up in the winter weather of Poona, lessons were given by the officers and NCO's from the AMC Centre in the various general and technical subjects such as general and rifle drill, weapon training, Map reading, Message writing and camp sanitation. The practical demonstrations of First Aid in Front Line, setting up a Regimental Aid Post, Advance Dressing Station and Main Dressing Station in the chain of evacuation of casualties and judging distance were just unforgettable.

During the camp, Brigadier M. K. Sheriff, Commander, Poona Sub-area, visited the camp. He expressed full satisfaction about the training, lay-out and routine of the camp. At the end of the camp Colonel C. L. Kapur Commandant, AMC Centre (South) Poona, inspected the camp and was nothing but praise on our smart turnout and drill at the ceremonial parades, gaurd-mounting and grasp of the various technical subjects.

On behalf of our Company, I take this opportunity to thank Commandant, AMC Centre (South), Officers and NCOs who were responsible in making the camp extra-ordinarily practical and a grand success.

During the camp, the cadets visited the National Academy, Kadhakvasala, Army Artificial Limb Centre and the Armed Forces Medical College with the finest Hygiene and Preventive Medicine Section in the Far East. Our cadets also saw various other places of interest in Poona and on the way back were taken to Bombay where they were able to go around the city.

Training parades were continued during January 1957 and we took part in the

Madras University Centenary Celebrations Parade and worked in the NCC stall at the same exhibition.

The then CQMS C. R. Kamath of this College proceeded to Delhi as a member of the "HQ. No. 2 Circle NCC Madras Republic Day Contingent" to take part in the Republic Day Celebrations there.

"B" & "C" certificate examinations were held during February and the following cadets of this College were awarded the certificates.

C. Certificates :

Cdt/CQMS C. R. Kamath.
Cdt/CPL G M. Kesavalu.
Cdt/L/CPL P Satyapalan.

B. Certificate :

Cdt. M. A. Rahim.
„ V. Srinivasan.
„ P. Sivarajan.
„ S. Thiagarajan.
„ T. Mahalingam.
„ V. Parthasarathy.
„ V. Thiagesan.

In the No. 2 circle NCC Annual Sports held at Rajaratnam Stadium Madras, Cdt. Dorairaj of this College improved the previous circle record in high jump and stood 2nd in broad jump. Also the "Tug-of-War" team of this company won the event.

Annual long range practice was held at the Meenambakkam range in the last week of February, the then Cdt/CQMS C. R. Kamath scoring the highest of 54 out of 65 points.

A farewell party and parade were held in honour of Lt. Col. C. K. Prasada Rao, M.D., the retiring Dean of Madras Medical College. We are very grateful to him for the kindness and guidance he has always shown us.

Cdt/CSM M. R. S. Ramakrishnan was promoted to Cdt. under officer & Cdt/CQMS C. R. Kamath to Cdt/CSM at the end of this academic year.

Eighteen cadets of this Company attended the Annual Social Service Camp conducted at Pallapatti during summer by No. 2 circle NCC. They were entirely responsible for the camp hospital, and dispensary. They supervised the camp sanitation and also did manual labour.

On behalf of the cadets, I shall take this opportunity to thank our Officer Commanding Capt. R. St. C. Perriera AMC, Capt. P. S. Babu Naidu, NCC, Lt. Padmanabhan NCC, Subedar Sankaran AMC, and the NCO instructors for the pains they have taken to train us, overcoming all the practical limitations and difficulties.

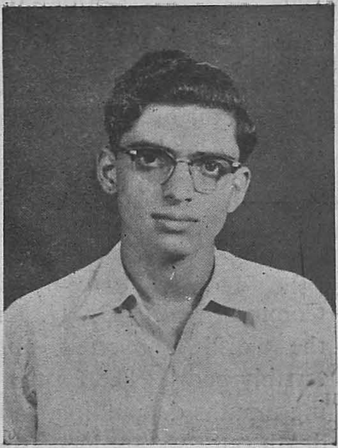
Lastly, I am proud to say we are fast achieving the aims of this great National Organisation :

(1) To develop character, comradeship, the ideal of service and capacity for leadership in young men and women.

(2) To provide service training so as to stimulate interest in the defence of the Country.

(3) To build up a resource of potential officers to enable the Armed Forces to expand rapidly in a National emergency.

Associate Editor's Page:



As We Look Around....

The Flu :

The academic year 1957–58, though jubilant, yet feels hard to put up with the hideous contamination and groans sick under the black clouds of Singapore Flu lingering still. Lots of boys and girls fall a prey to fell flu, and it is good fun, as long as the onlooker is safe, to watch people get caught unawares and pay a lion's share of vigour in confinement. The air is reeking with reckless, raving Influenza while papers make a fuss, gossipers find staple and gourmets at the Hostel mess close their eyes, grip the nose and gulp in cups of ginger Kashayam. Of all the states in India, they say, Madras is worst hit with 500,000 victims. And now while antivaccines are coming forth, the flu is going west.

Elections :

The month of July is on with election bustle and everybody starts dreaming and getting ideas. Call it a comic tragedy or a tragic comedy, it all lies in how you speculated. But campaigns this year, are most colourful. Controversies, confusion and last hour decisions, so many, add to the tempo and make up for a real show ; and the results are none the less; arraying a set of winners, ' chivalrous ' sensible, cynical and, I must say, conceited too. But one just can't say why ladies need so much prompting for filing nominations. Should their rumoured grievances be true and against men in general, it is a pity and if against individuals it is ill-conceived waiving. Abstentions under such circumstances fail to impress anybody and after all nothing could prevail upon ' boys ' to volunteering promise of good conduct. Anyway, they seem to do well, though with lapse of time, to be up again, to fight. Yes they must fight for more posts and greater share in college activities.

Freshers :

Talking of the 'first years ', this year, one can say, they are a pack of smart boys and beautiful girls. But it is odd to find girls boycott their excursion. They don't seem to have understood what it is meant for : to taste of the picknicky glamour and have the feel of being in the strange company of would-be friends. What made them neglet the experience one cannot quite substantiate. Maybe, they try mimicking

their seniors. But mind you, familiarity breeds indifference and if the '3rd years' wouldn't have it, it is because they have rusted through more than two full years in the chill air of sophistication and are weighted down by the heaviness of uneasy knowledge. Alas ! you have missed the bus and you cannot now cancel knowledge and get back to the days of ' innocence '.

W. H. O. Day :

The W. H. O. Day is celebrated in the last week of July, at the M. M. C. Common Hall. Dr. U. Krishna Rao, speaking on the occasion, says, while a part of the world is overfed, another part eats itself to death. How horribly true ! and how terribly bad ! The East is teeming with men, lessening living space and fast multiplying mouths demanding food. While improved health conditions could well reduce the death rate, we are increasing at a rate of of 25 million people a year in the world over, India alone contributing 5 million persons. Hungry people are ever on the increase and empty lands lie waste, though replete with potential resources. But who will stop to think, if Dr. Chandrasekar would suggest scheming the utopian task of melting the snows of the Himalayas, taming deserts and turning them into tropical paradises. Nuclear fission is the talk of the day and devil may care if radio active fall-outs contaminate the East, pollute food and produce bone cancer, Leukaemia, genetic mutation and what not. As per data available sometime ago, 100,000 more people may possibly die of leukaemia in the next 30 years due to radio active fall-outs of the last 6 years. The family planning campaign, cannot but be sluggish to break through the ' organised ignorance ' of people, and what a task lies ahead! And horribly enough, within a period of not more than five months we have had to a face a series of attaks of flu, typhoid and cholera at our very doors.

Association News :

Inaugural :

The college Association gets inaugurated by General K. M. Cariappa on the 8th of August. The solemnity and the success of the occasion are a happy augury for a bright future. Tall in stature and in a domineering tone, the speaker commands attention and strikes a responsive cord in the minds of people. He exclaims at the scanty provision in institutions and expresses sympathy and support for the well being of student population. He calls for the propagation of birth control and cries, it is not five year plans, but family planning that we need most. He inculcates a strong sense of duty, discipline, character and fear of God in the minds of his audience and exhorts, " Learn to obey, learn to command and don't be slaves to silly sentiments. " " We have got to work until our work is finished ", the speaker bursts out. It is worth repeating at this instance what someone said of medical profession, " It is not an occupation, but a vocation, a life-commitment rather than a livelihood, an obsession rather than a profession."

Freedom Struggle Centenary Day :

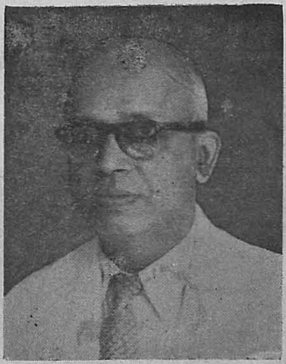
Speaking on the 15th of August, Dr. Ananthanarayana Aiyar carries us away with colourful vistas of the past and steers us back through the pages of history making brief halts at milestones.

He recalls the Vedic age, the days of Kanishka, Captain Cook and the aborigines of Australia, Boer war, African apartheid and the anachronic racial arrogance and gets us to the core of the day's crisis. He surprises his audience with an odd say on Family planning. Indians are extremely clever people and let us grow in number and there is no need for family planning, he says. It is puzzling as to what made him come out with such an expression. Perhaps he thinks with Tagore that every child comes with the promise that God is not discouraged of man. Dr. Nambiar evokes cheers with his usual glamour and expresses a wish that the day may be nigh, when again to see India on the lead, as it was once. Dr. Natarajan calls for economic and social emancipation, now that we have enjoyed political freedom, these ten years.

The Farewells :

It is a sad case indeed that we should keep on saying farewell to so many of our staff members. And it is not just many, but good many, and beloved many : Dr. C. Ragavachari, Dr. V. A. Ramurthy, Dr. M. Natarajan, Dr. A. R. Govinda Rao, Dr. K. G. Krishnaswamy and Dr. Harirajan. It is confucius who said, " I shall teach, even if but a pittance be offered me ", and here is a man drunk with the passion for teaching. Talking on the Vanamahotchava day, Dr. Ragavachari makes an allegory of things and calls himself a gardener, happy with the complacency of having brought up many a tree and now made perforce a mastri of the garden. Again in his farewell address he repeats, he could have pulled on, but all that he resents is the administrative slings, and he craves for the joy of teaching. God knows why, but our misfortune and the indiscretion of people have conspired together to drive out a man who has endeared himself to the Stanley hearts to far too great a measure.

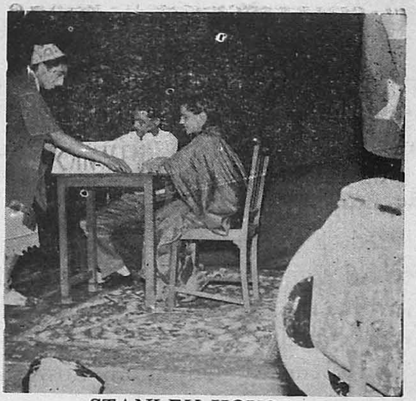
Dr. M. NATARAJAN,
Our Ex-Vice Principal.



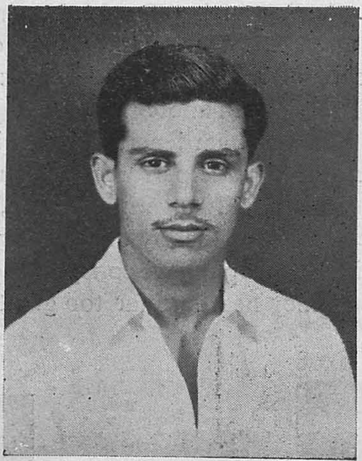
Dr. N. VAIDYANATHAN,
Our Dean for the interim period.

As Dr. Nambiar put it the other day, Dr. K. G. K. was the soul and hope of Hope block ; and if the soul goes, well, dry your eyes and look up, the Atma (Dr. Atmarama Rao) comes in! As for Dr. Natarajan, he was tough as truth and cold as reason, though bare truth and plain reason didn't make him dry. He had the charm of

AHMED KHAN & PARTY - SONG
Graduates' reception
Rocking music; rolling NO1SE....

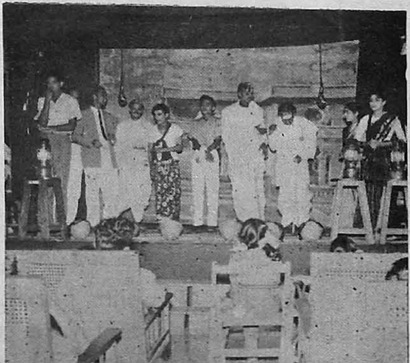


STANLEY HOUSE
IN THE BLAZE OF MOON - SKIT
Graduates' reception
Micky Mouse in the place of Cantheen....



M.,A.-THAMBI,
Inter Collegiate prize winner for acting
Man of the moment......

MALATHY GORAY & ABDUL HAMID—DUET
Graduates' reception
Expression of the inexpressible......

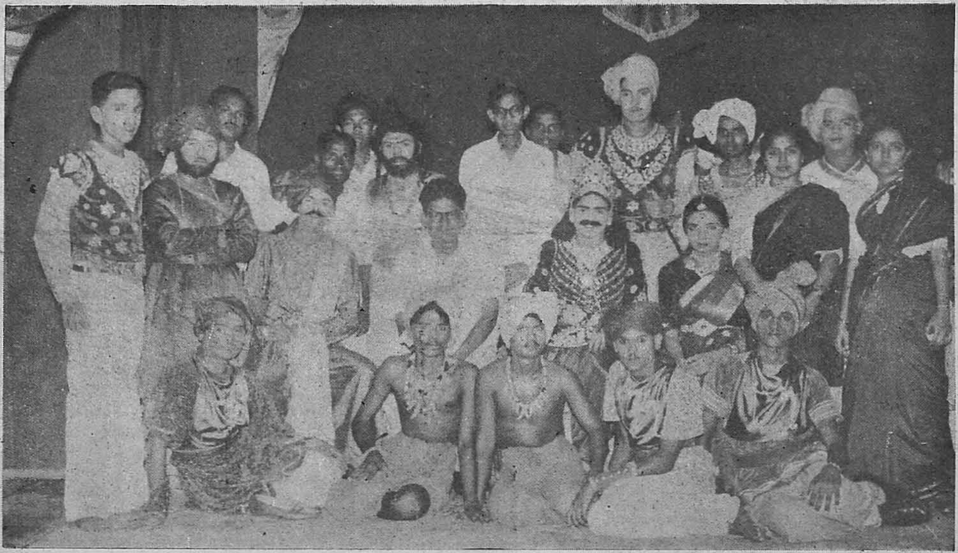


Dr. VESHADARI - DRAMA
Graduates' reception
Tear the mask and catch the thief....

personality and kept people attracted in the effulgence of his social mind and practical sense. He allowed people to talk though would never succumb to unction and falter in justice. If to be great is to be misunderstood, Dr. Natarajan was an example.

Reception to graduates :

The graduates' reception day is all attraction and a big success. The simples truths are the most perfect. And Sir C. P. Ramaswamy Aiyar who speaks on the occasion has the clairvoyance to trace the sole cause of misery to the lack of two fundamental principles Education and Public health. He hints upon the futility of efforts towards cultural, industrial and agricultural developments, while work for education and public health suffers a set back. Touching upon the craze for specialization in medical fields, he exclaims, we are becoming mere rubber stamps, steam-rolled into uniformity, striving to know more and more of less and less.



CHERAN SENGUTTUVAN—Tamil Drama
Emotion, Commotion, Creation......

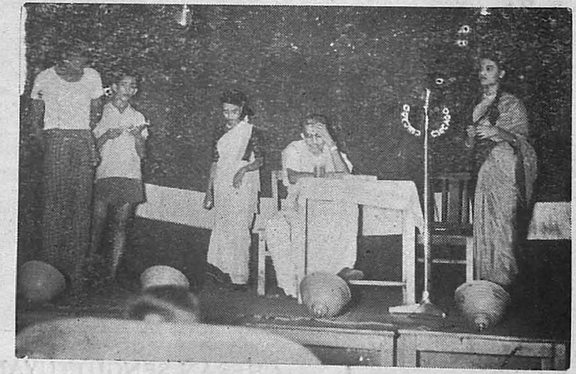
The day is talked of as one of the best in the history of Stanley, rich with the colourful variety entertainments, full of wits, music and imposing shows. Failing electricity testifies to the integrity and discipline of Stanley students and the grandeur of the show. Ahmed Khan sings, " O my failing heart !", his heart might fail and so also the electricity, but never his wits. The first years introduce themselves with a thing called dance, very much approximating a ' thandavam'. Dr. Veshadari and Cheran Senguttuvan stand not only for our histrionic talents, but to cap it all, they serve as the very symbol of the Stanleyan spirit. Dr. Kothandaramiah deserves mention for the very good Mono act, well appreciated by all and understood by a few. All in all it is a day of days ; from the " Stanley house in the blaze of moon " down to the beautiful

floral carpet, everything is *par excellence.* Three cheers to the Art's section—Heart-sex-on, shouts Galaba.

PRIZE DISTRIBUTION BY THE DEAN
Bharathi Day
The joy of giving and the thrill of getting....

SIRKALI GOVINDARAJAN-Music entertainment
Bharathi Day
Ringing harmony....

FLORAL CARPET
Bharathi Day
A day of days for a poet among poets....



MALAYALAM DRAMA
Onam Day
Wipe out love; there will be lust..

Cultural :

The Onam and Bharathi days are celebrated with the usual pomp and festivity. Mr. Lonappan and Miss Sudha, the secretaries, and others of the Onam day committee deserve congratulation for their hard work and good show. The Pongal day committee, with Mr. Varadan and Miss Shanthi Periyanayagam at the fore, does well to bring in big people from outside and arrange the music recital and conduct the music competition.

Our Visitors :

The Californian delegation as usual visits the college and the social service centres, this year also. Asked as to why medical students would not join the team, they reply, medical students find too llttle time for trips abroad, and that is saying a lot of the American medicoes. Again they say, the Indian student is political conscious as compared to the social minded American student. The will to learn and the spirit of adventure haunt the transatlantic minds. And well, we are in general, as they say, too much disturbed by external influences and, much more than that, feel very reluctant to free ourselves from sbismatic tendencies and the bounds of prejudices. We are yet a long way off from a healthy society and, more often than not, fail in duty, forgetting the fish and fussing over the net. One is dismayed to observe that while a part of our people are lost in indulgence in pseudo adventurism and displays of foolhardiness, a sect at the other extreme gets ensnared in the maze of narrow sentiments; so much so that, the balanced are few.

Prof. Bennett of John Hopkin's Hospital visits the hospital and gives brilliant lectures on Antibiotics. His lectures are interesting and well laid out. He talks of the supremacy of penicillin over other antibiotics for its innocuity, cheapness and more than all, its bacteriocidal action as compared to other bacteriostatic antibiotics. He particularly emphazises the necessity for a thorough consideration of all aspects of the patient before diagnosis and the ineffectiveness of any antibiotic in cases of infection with suppuration, where the causative organisms lie inaccessible to the drug, and also the paramount need for referring such cases to the surgical side. And he calls for humility and the willingness to keep learning, own one's mistakes and rectify them.

Social service :

Our social Service League is doing laudable work and the Californian delegation is all praise for it. The breezy ride, happy company and the joy of service can all be well improved upon with less noise, more work and better behaviour of certain 'Social Workers'.

And, perhaps, one may be laughed at, but it is pushing temptation to say that we have a beam in our eyes and throw a suggestion : something could be done to the team of waifs and strays and picker boys thronging the hostel. Many of them supplement their earnings with the gleanings they get from their student-masters. Most of them ape their masters, dress up and trip the campus. There is every possibility, they might take to juvenile delinquency or get lost to perpetual servility. Maybe, a night school will be paving way to further work.

The Hostel :

The Hostel Association is inaugurated by Mr. Chengalvarayan, Ex-Mayor, with Dr. A. Ananthanarayana Aiyar in the chair. The pathology of war and the anatomy of peace are the topic for the day and Mr. Chengalvarayan makes a spirited appeal for peace and declares, it is neither Democracy nor the world but Winston Churchill

and his once 'Great' Britain that are saved by war. Dr. Aiyar's talk is far too impressive and, if I may say so, he is in his best form that day. He is a genius given to creative thinking and ceaseless work, a personality of old and new into one, a source of inspiration and a boon to Stanley. Man is 99 percent instincts and sentiments and no rationalization can win over them, he says, and continues, the advocates of war are the Rip Van Winkles of ages past and also let us first turn to reform ourselves rather than carping at others.

The eye sore of contract mess system is got rid of at length and we revert back, richer with the lesson of experience, to the good old dividend system. We have had the double shame of self deception and vicarious suffering with the contract basis. May we in future have the good sense to attend to our own needs.

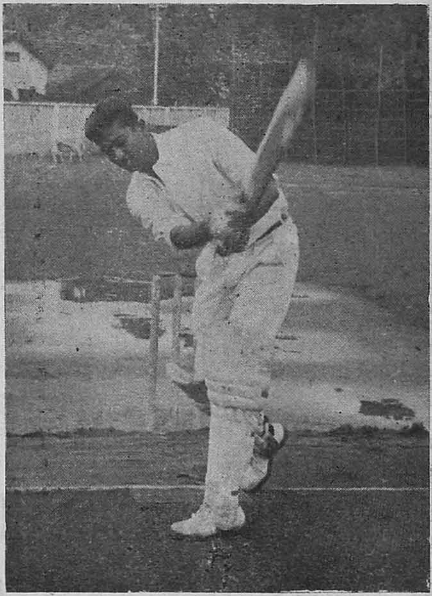
Another bugbear of our authorities is accommodation. Enough has been said and done for our part. And I hear, some poor oldtimers have plans for raising huts on the pavements. But those in power will only postpone the enforcement of rules, but never abrogate. And we make a sincere appeal to all concerned, please do not turn a deaf ear and disown us. It is no use taking to short cuts and, making us the scape goats, drive us out. Please, if not priority, give us parity with others, and it is certainly worth spending to erect additional houses.

Sports :

We have won many a laurel, for the year, in the field of sports. Durairaj has given remarkable performances at the Freedom Struggle Centenary sports meet and has achieved new heights at other occasions. He set up a new state record in High jump, clearing 6′2¼″. He is also placed first in the Annamalai University sports meet in high jump. Swaminathan has been in fine form in cricket and has earned a name as a consistent batsman. He gets selected together with Ramurthy for the University Cricket Team. And also he gets selection for The Madras Cricket Association against Ceylon and for Madras in the inter association match against Mysore. N.M. Abdul Jabbar and Durairaj, "the tall and lanky tower of strength to the college team", get selected for the University Volley Ball team.

G. DURAIRAJ-IN ACTION

Stooping heights....



G. SWAMINATHAN-IN ACTION
Smashing strokes....

Rajendran, the state and university player, is an asset to our basket ball team. We have won against the M.M.C. in the Janakiram Memorial Football Tournament. Shetty and Sivaprakasam as usual have put up good show and come up to the Zonal finals. After a pause for years, under the able captaincy of Govindachary, our badminton team comes out triumphant in the freedom struggle centenary tournaments for city colleges and we are runners in volley ball. The Stanley team consisting of R. Balasubramaniyan, Jesudas and Subbhuswamy makes an impressive *debut* in the intercollegiate table tennis tournament and comes upto semi finals, occupying the 3rd place among the city colleges.

It is of special importance to mention that we have instituted the Aboobucker memorial inter-collegiate badminton tourney. Govindachary must be commended for the painstaking efforts.

Obituary :

With deep regret and great sorrow we record the death of Mr. Aboobucker, Mr. Janardhanam Nair, Mr. Govinda Bhat and Miss Hemalatha, all in a very short span of time. Fate has tarred the face of Stanley with black death and snatched away four lives in the prime of youth. Be it the will of God or the coldness of sheer Accident or that " Whom God loves die young ", it is too much to face, too heavy a toll. Ineffaceable, ever-fresh and never-dying, their memories will live with us.

We convey our deepest condolences to their bereaved parents and pray with them, " May their souls rest in peace ".

N. Natarajan.

" Even if there were no God it would be necessary to invent Him. "

—*Voltaire.*

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Signature of Publisher
(Sd)R. KRISHNASWAMY,
General Editor,
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